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SWAN — CLEARWATER VALLEY

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THE ECONOMIC IMPACT OF STATE HIGHWAY MONTANA 209 ON THE SWAN-CLEARWATER VALLEY

October 1967

by

Lawrence J. Hunt
Kent T. Adair
and
Daniel R. Blake

Prepared for the
Montana State Highway Commission
Planning Survey Section
in cooperation with the
U.S. Department of Transportation
Federal Highway Administration
Bureau of Public Roads

By the
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School of Business Administration
University of Montana
Missoula, Montana

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Chapter I

Introduction

Description of the Report

This is a report of the findings of a research study on the effects of the construction and completion of Montana Highway 209 upon the local economy of the Swan-Clearwater Valley. The highway, which in this report will be referred to as either Montana 209, or the Swan-Clearwater Highway, or sometimes just as "the highway," was completed in 1964. It traverses the Swan-Clearwater Valley, connecting with Montana 20 which runs from Missoula to Great Falls, and Montana 35 which skirts the east shore of Flathead Lake (the map in Chapter II illustrates the location of the highway and the study area). The report begins with a description of the area through which this highway runs, and the historical development of the valley with emphasis on the settlement pattern, economic activity, and early modes of transportation. A major section of the report deals with the highway itself, its construction pattern, its relation to other highways and roads in the area, its traffic flow and the general characteristics of the motorists who use it. Other principal sections of the report deal with the research on the effects of the highway upon the leading economic activities of the Swan-Clearwater Valley: logging and lumbering, outdoor recreation, and the trade and service industries. Another section deals with the social effects of the highway upon the communities and residents of the area; and, last, the summary and conclusion of the findings of the research are presented.

Constraints of the Research

The influence of any highway is difficult to assess because a highway is only one factor which may affect productive and social activities of the area through which it passes. Other factors such as increase in population, exploitation of resources, rising levels of income, and so forth are all elements of a developing economy. Nor can any one highway and the area it serves be viewed in isolation. It is only one part of a total transportation system and, as such, must be analyzed as an integral part of a region's total transportation network. In this respect Montana 209 is dependent upon the highways to which it is linked and from which it draws much of its traffic.

The study of Montana 209 is somewhat different from many highway impact studies in that the Swan-Clearwater route opened up an area which had been previously somewhat isolated. Formerly, the roads into the area were so bad that through traffic was discouraged, and the users of the roads were mainly those connected with logging and forest management or those who prefer wilderness recreation. Although the Swan-Clearwater Valley has a long history of recreational development dating back to the turn of the Century, the average tourist did not tour the valley to the extent he does today. Besides logging and some lumber production there was little economic activity. The land ownership pattern in itself deterred any substantial degree of private investment outside of the actual harvesting of timber products.

One of the problems this study faced in determining the economic impact of Montana 209 was the fact that it was completed in sections. The first was completed in 1952 and the last in 1964. This completion by sections made a before-and-after study of the highway's impact almost unfeasible unless the impact was examined by section completions. But this investigation proved rather fruitless in that the information on a "before" basis was sketchy, and that which was available was hard to relate to the individual sections of completed highway. Traffic counts along the route are one exception and are herein analyzed. Good data on logging and lumbering production are available but relating these data to a particular section of road completion is difficult. There is certainly evidence that the highway has made a contribution, but how much? And how does one relate this to each section of highway completion? This study has tried to analyze the data available and to present it in the most relevent form. As will be discussed in a later part of the report, there are many other factors besides easy access which contribute to the development of logging and timber production: available stumpage, the lumber market, forest management practices, and so forth.

Recreation, a major aspect of the Valley's economy and an important part of the study is at best a difficult activity to measure. Tourist traffic can be counted, and the use of recreational facilities can be recorded, but it is impossible to place a price tag on the pleasure a tourist enjoys from a stay in the Valley. Here is a typical comment by one visitor:

> ...the excellent fishing, easy accessibility, and the lack of crowds hooked us completely. For a family like ours, or any outdoor-minded vacationers, this is the finest camping, fishing, and relaxing country we've seen anywhere.[1]

These are some of the recreational intangibles which are difficult to measure and yet may be one of the most significant consequences of the construction of Montana 209. Thus a purely economic analysis of the recreational

---

data of the route through the Swan-Clearwater Valley really does not provide an understanding of the value of the highway to its users. This was mentioned in the preliminary report on the construction of the highway made in 1946. It stated that from a financial standpoint the report would not necessarily attempt to justify construction of the highway as few roads in sparsely populated states, even in a primary system, are self-supporting, any more than are many other public improvements and facilities. As Mr. English stated, "That is, traffic over this entire route was expected to be considerably less than that required to construct and maintain it."[2]

In studies of this kind made in other states, evidence of economic effects of highway completion have been drawn primarily from retail sales tax data. The economic effects have been judged on the basis of gross receipts of the communities along the highway route. Montana does not have a retail sales tax. It does have a net income tax which provides for the reporting of gross receipts, but in previous studies of this kind it has been discovered that obtaining this historical information is difficult and because of changes in the procedure of income reporting, the data are inconsistent.[3] Therefore it was felt that research in this area would be fruitless, and it was not undertaken.

---

[2] J. F. English, Economic and Traffic Analysis and Design Requirement Report on Swan River Forest Highway Route No. 15, Federal Works Agency Public Roads Administration, Division 8, Highway Planning Survey (typewritten, 1946), p. 2.

[3] Effects of Highway Bypasses on Five Montana Communities, Bureau of Business and Economic Research, University of Montana, Missoula, Montana. A report prepared for the Montana State Highway Commission, 1965, p. 7.

It was hoped that state employment data for the area could be utilized but these data are deficient because small "mom and pop" establishments with no employees are not reported and the data are only available on a county-wide basis. This means that data for the area involved in the study cannot be segregated and are therefore relatively meaningless.

These constraints and others that appeared as the study progressed played a role in shaping the final research plan. We do feel, however, that the methodology described below provides a meaningful analysis of the subject.

Objectives and Methodology

The primary objective of the study was to determine as realistically as possible the economic and social changes that have occurred as the result of the completion of Montana 209. To determine the economic impact, secondary data were sought on as many economic indicators as was considered feasible. As has been explained, most secondary data were deficient in one respect or another. As a result, primary data on most phases of the study had to be gathered. These primary data were either collected in the field or by mail questionnaire. Where practicable most of these data were obtained and analyzed on either a year-to-year basis or for five year intervals from 1950 through 1965, and include at least estimates for the year 1966. The data were then related to the highway construction pattern, and an attempt was made to ascertain the impact of the highway completion so far as it could be forecast from the trends of the data.

With the limited economic activity currently present in the Valley, it was also considered important to examine carefully potential development. This, of course, brings into the study a subjective approach even though the

In this area of the study the opinions of those engaged presently in some form of economic activity within the Valley were sought. It was felt by the researchers that as Montana 209 becomes better known it may have more impact on the future development of the area than it has had up to the present.

Chapter II

Description and Historical Development of the Swan-Clearwater Valley

Location

The Swan-Clearwater Valley is located in the northwest part of Montana. It lies in the Rocky Mountain chain bounded on the east by the mountains of the Swan Range and on the west by the Mission Range. The valley proper begins near Big Fork, Montana, where the Swan River enters Flathead Lake and extends approximately a hundred miles in a southeasterly direction to where the Clearwater River meets the Blackfoot River. The northern valley of the Swan River is continuous with that of the Clearwater River, separated by a low glacial deposit called a morainic divide. Both the Swan and Clearwater rivers are included in the Montana head waters of the massive Columbia River Basin; and these two rivers are unusual in the fact that they flow north and south instead of west.

The area under study contains approximately 707,750 acres which lie within three counties: Missoula, Lake, and Flathead. For purposes of the study the boundaries of the area are designated as the Mission Range on the west; the Swan Range to the east; Big Fork and the course of the Swan River prior to flowing into Flathead Lake form the north boundary, while the southern boundary is formed partly by Montana 20 from the Powell county line to Clearwater Junction and from there the west boundary follows designated section lines until it reaches the western divide of the Valley, from which point it travels in a northwesterly direction to meet up with the Mission Range (see Figure 1). The nearest main population centers outside the study area are Kalispell, some 18 miles northwest of Big Fork, and Missoula, 39 miles west of Clearwater Junction.

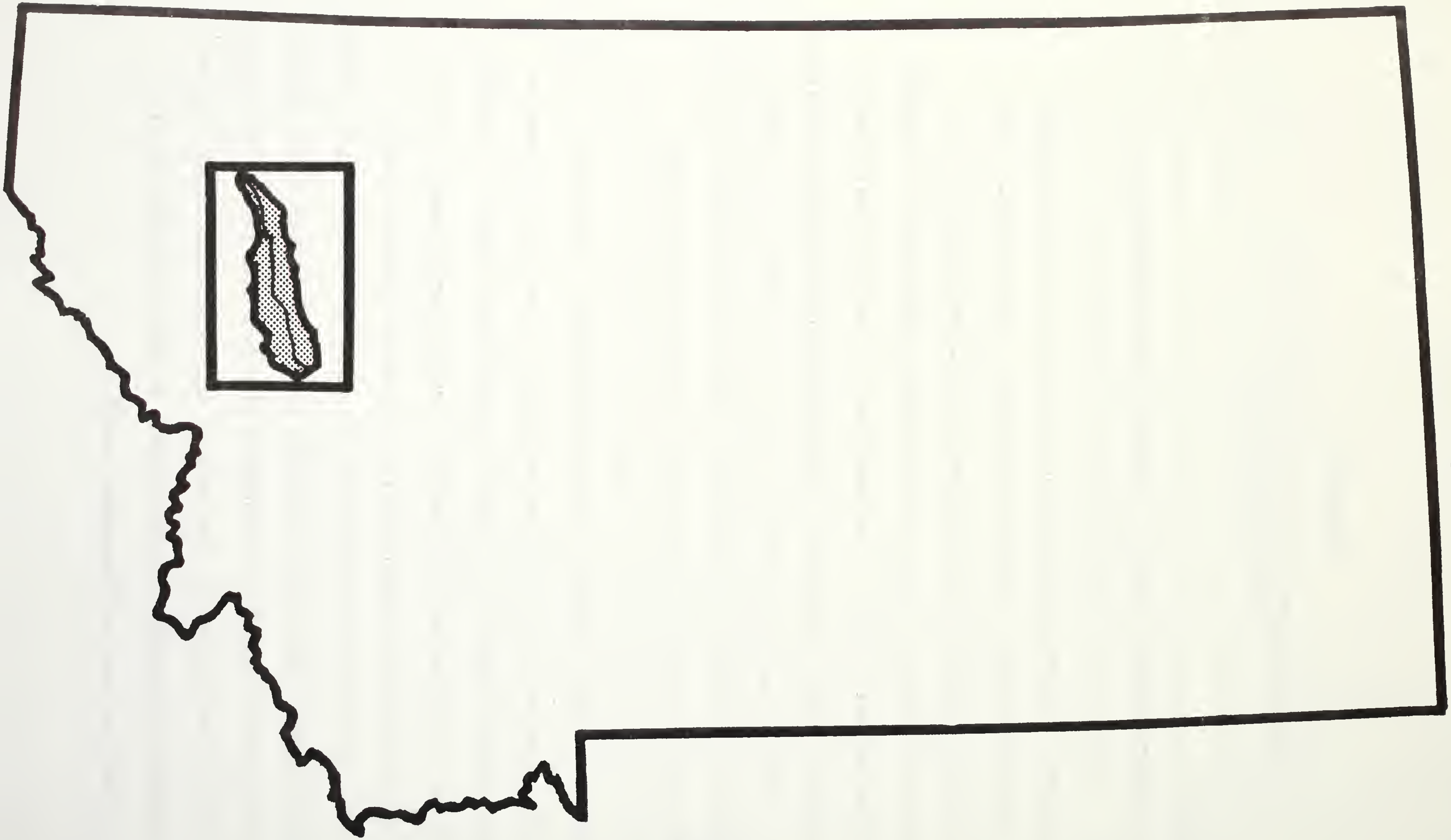


Figure 1

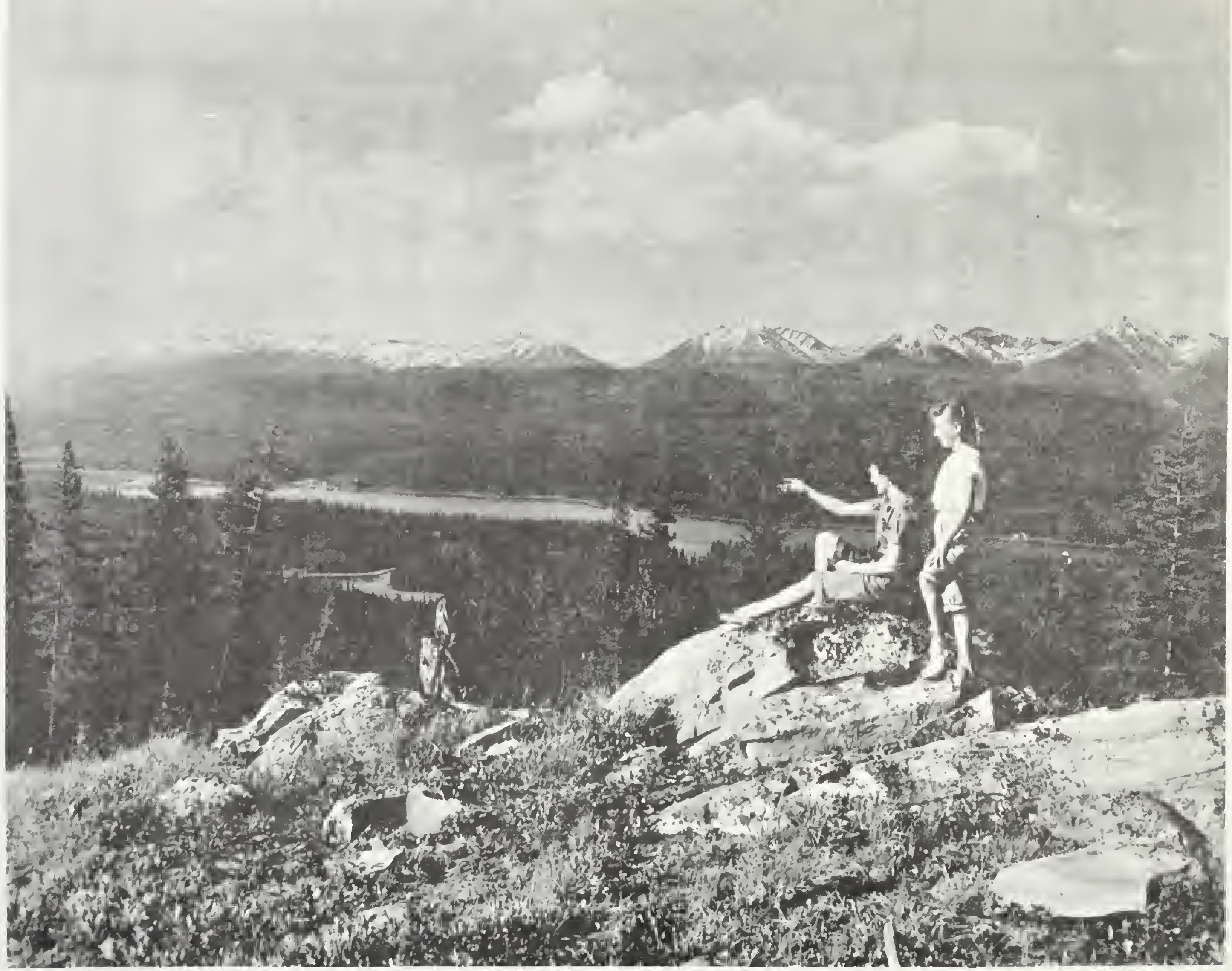
Study Area in Relation to the State of Montana

In several respects this area through which the Swan-Clearwater Highway passes is advantageously located. For those engaged in lumbering, the forests of the Valley are close to two major milling centers, Kalispell to the north and Missoula to the south. (The utilization and the impact of the highway on this resource are fully explored later in the report.)

Recreationally, the area, besides being a tourist attraction in itself, lies almost in a direct line between two of the nation's largest national parks: Glacier and Yellowstone. As the route becomes better known, more and more of the tourists traveling between these two parks will be taking Montana 209 through the Swan-Clearwater Valley. Because the Valley is relatively close to all of the major population centers in western Montana: Great Falls, Helena, Butte-Anaconda, Whitefish-Columbia Falls, Kalispell, and Missoula, it should attract numerous new summer home owners and weekend visitors. The area will undoubtedly receive a greater amount of recreational traffic when a route is paved connecting Montana Highway 20 with Interstate Highway 90 and U. S. Highway 12. These connecting roads are State Highways 271 and 272, often referred to as the Helmville and Avon cutoffs. Properly marked and paved, these roads would increase the Swan-Clearwater through-tourist traffic, as well as make the valley recreationally more attractive to the residents of the Helena and Butte-Anaconda population areas.

Topography

The Swan-Clearwater Valley is U-shaped, flanked by fairly steep parallel ridges typical of glacial formed valleys. Elevations range from a low of 3,000 to 4,000 feet on the valley floor to a height of 9,255 feet in the Swan Range--with Swan Peak as the highest point, and to 10,000 feet in the



A view of the Swan-Clearwater Valley illustrating
the topography of the study area. This photo was taken from Double Arrow
Lookout on the western slope of the Valley overlooking Seeley Lake with the Swan Range in the background.

Montana Highway Commission
Photo

Mission Range where Mount Hardin presents the greatest altitude.

The Valley floor varies in width from four to sixteen miles with a terrain that is rolling and remarkably uniform in general topographical features. This uniformity is evidenced by the moderate current of the rivers which flow through the Valley. The Swan River flowing north has a two to five percent grade. The Clearwater River has approximately the same grade until it leaves Salmon Lake. From there to the point where it meets the Blackfoot it falls at a much faster rate and as a result has formed a rather deep gorge. A number of good sized lakes and many more smaller ones dot the Valley floor. A great number of lakes are also found in the higher elevations, especially along the higher elevations of the two mountain ranges. The major lakes of the Valley, reading from north to south, are Swan Lake, Holland Lake, and Lindberg Lake in the Swan Lake drainage. In the Clearwater drainage are Rainy Lake, Lake Alva, Lake Inez, Seeley Lake, Placid Lake, and Salmon Lake. All of the above named lakes except Holland, Lindberg and Placid border the Swan-Clearwater Highway and either the Swan or the Clearwater river connects with all of them except Holland Lake.

Perhaps the topography of the Swan-Clearwater Valley is its greatest asset. With its many lakes, streams, and towering mountains it is a virtual outdoorsman's paradise. Now, with the easy access made possible by the Swan-Clearwater Highway, the Valley's beauty and grandeur can be easily enjoyed by everyone.

Vegetation

Except for the lakes and scattered meadows, the land in the Valley is quite heavily forested. An exception is at the very north end of the Valley where the Swan River makes a gooseneck into Flathead County. Here there is quite an expanse of cultivated farm land. Alfalfa, row crops and fruits of various kinds are grown here. In the interior of the Valley the timber line extends up the west slope to an elevation of 6,500 feet and up the east slope to an elevation of about 7,000 feet. The forests of the Valley are unique in that almost every coniferous tree species native to Montana occur here as well as many evergreen species. (A later separate section of the study is devoted to a description of the timber resources of the area.) By providing easy access the Swan-Clearwater Highway has contributed to the management of the forests, the Valley's major type of vegetation, and has made it possible for greater numbers of people to enjoy the scenic aspects of the Valley.

Geology and Soil

Scattered boulders on the Valley floor provide ample evidence of the glacial activity which initially formed the Valley. In the higher elevations the glacial activity is evident in the scooped-out mountain lakes, the cirques and the knife-edged ridges leading down to the Valley floor. The soils of the Valley are typically glacial in origin. The land varies from a poorly drained marshy surface in the lower depression of the Valley to shallow, stony loam soils in the foothills. Above the timber line a large portion of the land surface is fairly destitute of soil with outcroppings of limestone and quartzite occurring almost continuously along the bordering mountain ranges.

The geological formation and soil of the Valley places certain limitations on the development of the area. The soil in general is of the type which can only produce a limited range of crops, primarily timber crops, and until this day little has been found in the way of mineral deposits. As a result the Swan-Clearwater Highway has not had too much impact on development of activities connected with agriculture or mineral exploitation.

Climate

The climate of the area varies considerably according to the elevation and season of the year. The mean average temperature of the valley floor is approximately 40 degrees Fahrenheit. The mean seasonal temperature is about 40 degrees Fahrenheit in the fall and spring, 20 degrees in the winter, and 60 degrees in the summer. Even at the lower elevations snows and killing frosts have been known to occur in every month of the year.

Precipitation in the Valley also varies with the elevation. The forest in the higher elevations accumulates a greater amount of moisture because of the heavier snowfall; some places have recorded as high as 50 inches of precipitation a year, whereas the valley floor in places receives as little as 20 inches of precipitation annually. The wet months of the year are generally June, September and October. The Valley is usually covered with snow from December until April while the higher elevations are snow-covered from November to June. The Valley growing season is from about the first of May until early September.

Weather plays a particularly important role in the recreational activity of the area. The packers, dude ranchers, resort owners and others who are dependent upon the tourist trade report that they find their business fluctuates considerably; it is down in the wet cool years and up in the dry the Swan-Clearwater Highway. In the winter the route has the advantage of being an all weather highway, since it has no high grades and is kept open by snow plows. For this reason many truckers find it desirable in traveling between Kalispell and Great Falls to use this route rather than go over Marias Pass on U. S. Highway 2 to the north.

Early Settlement

Little is known about the very earliest white men who visited the Swan-Clearwater Valley. A fur trapper by the name of Lieg Morents is reported to have been the first white man to visit the Flathead Valley, at least the first to leave any record of being there. He is also considered to have been the first white man in the lower Swan--at least he lived with the Indians who camped at the mouth of the Swan River.[4]

There is a record of a Mr. Upton being in the Valley during the fall of 1866 and it seems probable that a few settlers had moved into the area in the early 1880's. In December, 1889, Jolen F. Stevens, chief engineer for the Great Northern Railway, found Marias Pass through the Rockies.[5] This proved to be quite a stimulus in populating the Flathead Valley which in turn had a favorable effect on the settlement of the Swan Valley.

Of all the study area, the lower Swan, particularly the Big Fork vicinity had the greatest early settlement activity. A man named Sliter seems to have been an active pioneer.

---

[4] Kedrick W. Flint and Vera D. Paul, Early History of Big Fork and Surrounding Communities (typewritten, 1957), p. 1. Montana State Historical Library, Helena, Montana.

[5] Ibid, p. 2.

In 1903 Big Fork is described as having three saloons, a post office in Sliter's Store and a hotel front which Sliter was at the time constructing.[6]

Although the upper Swan Valley didn't really begin to develop until the logging of later years it had its early beginning in the early 1890's.

> There were a number of men in the area at this time. Vanderworka, Herter, and a few other people took their residence around Goat Creek and Lion Creek.[7]

Apparently there was little settlement beyond the lower Swan at this early date, because in 1899 H. B. Ayres, who prepared a report on the Lewis and Clark Forest Reserve which encompassed the Valley, had the following to say about its settlement:

> In the Swan Valley are several squatters about the head of Swan Lake, but they have few improvements except their houses. Between this and Holland's there are about ten log houses--all of them unoccupied. Holland's Ranch at the mouth of Holland Creek comprises several log houses and stables. Mr. Holland has several hundred acres fenced in which he is using as pasture for cattle and horses. At the foot of Elbow Lake is a trapper's cabin, occupied at present. On the Clearwater, Mr. Seeley, a forest ranger, has occupied a ranch at the head of the lake for several years. He has recently built a larger house near the foot of the lake, and within about one-fourth of a mile of the reserve line....[8]

After the United States Homestead Act of 1911 was enacted, a number of homesteads were taken up in the Swan Valley. Many of these were on submarginal land and were later abandoned.

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[6] Frank H. Trippet and L. L. Bain, History of Big Fork, (Kalispell: Trippet Publishers, 1956), p. 46, Montana State Historical Library, Helena, Montana.

[7] Flint and Paul, op. cit., p. 30.

[8] Annual Report of the Department of the Interior 1900, (Washington, D. C.: Government Printing Office, 1900), p. 55.

According to Donald MacKenzie, who came into the area in 1910, the early settlers really started homesteading in the Swan Valley in 1912. Most of the settlers were Finlanders or of Finnish descent. They worked in the woods during the winter time and cleared their land during the summer months. They had little stock except for a milk cow or two and the crops didn't amount to much. Mr. MacKenzie said he didn't know of any decent place in the whole Swan River Valley.[9]

Mrs. Ellen Deegan, a Swan Valley resident since 1913, says that she was the first white woman in Township 20.[10] At that time, outside of a few trappers and prospectors, she remembers only Indians. She compares the Valley in 1913 with the present day Bob Marshall Wilderness. Wild life was tame. Deer roamed the Valley in bunches of 40 or 50 like herds of sheep, she says. Mrs. Deegan's husband, a Northern Pacific engineer, felt that someday a logging railroad would be constructed through the Valley, but his vision never came true. Deegan was quite a promoter of the area. Dr. W. E. Thieme, who homesteaded on the west shore of Seeley Lake in 1913, feels that one reason early settlement in the Swan Valley grew at a faster rate than in the Seeley Lake area was because of Deegan's efforts. Deegan, Dr. Thieme reports, was always "talking up" the Swan Valley and for $50 would locate settlers there.[11]

---

[9] Personal interview with Donald MacKenzie, Missoula, Montana, July, 1966.

[10] Personal interview with Mrs. Ellen Deegan, Seeley Lake, Montana, September, 1966.

[11] Personal interview with Dr. W. E. Thieme, Seeley Lake, Montana, September, 1966.

The upper Swan Lake area made its biggest development when the Somers Lumber Company moved into the area in 1914. The company maintained its logging headquarters at the head of the lake and supplied its Swan Valley operations from there. Two historians of the area describe the activity of this part of the Valley at that time:

> The lake was dredged so the steamboats could get to the Company warehouse to unload supplies. These boats were the principal means of travel for there were no roads with the exception of the ice road.... But in spite of this the community was quite self-sufficient. The Company had from 150 to 160 head of cattle and a large herd of hogs. An entire field was devoted to potatoes. They had their own slaughter house and blacksmith. They owned a store and post office run by A. K. Millet. For the convenience of Company officials and occasional guests, the Company maintained a commodious hotel near the warehouse. The first school was started in 1914 with Miss McBride as teacher.[12]

Early settlement in the Clearwater Valley progressed at a slower pace than in the Swan. In some respects it was more isolated because it was less accessible to the fertile Flathead Valley where there was considerable early settlement activity. Also, the Clearwater had less to offer the homesteader (over the Swan) since the terrain was not as well adapted to farming. Dr. Thieme remembers only four homesteaders in the Seeley Lake area in 1913. Dr. Thieme says that in this early day Seeley Lake was a virtual hideout for desperadoes of all kinds. Mrs. Thieme, who came into Seeley Lake in 1915, recalls that she and two others were the only white women in this part of the Valley.[13]

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[12] Trippet and Bain, op. cit., p. 60.

[13] Personal interview with Mrs. W. E. Thieme, Seeley Lake, Montana, September, 1966.

The Thiemes, who moved away from Seeley Lake in 1919, say there were less than a dozen homesteaders in the area when they left.

Even at this early date, though, there was considerable interest in summer homes around the lake. On Salmon Lake, to the south, William Clark, son of the Butte mining magnate started construction on summer quarters in 1911.[14] Some of the buildings, after changing hands several times, are still in existence today and are owned by the Catholic Diocese of Helena which uses the facilities as a retreat for its clergy. In 1915 Cornelius F. Kelley, the future Chairman of the Board of the Anaconda Company, and his close friend, Lewis Orvis Evans, a prominent Butte lawyer, undertook a joint occupation of a 137 acre clearing on the north shore of Swan Lake. Later, each went on his own. Kelley constructed a group of cabins and extended his holdings until he, in 1957, had a domain of 7,000 acres.[15] (It is reported that much or all of this land has been sold since 1957.)

The early settlement of the Swan-Clearwater Valley was hindered in considerable measure by the lack of good roads. General settlement of the Valley is reported to have picked up some immediately after World War I, but this activity was fairly limited until several lumber mills began operation in the Valley during the 1940's. Most of this activity took place after World War II when three mills were in existence.

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[14] According to the Missoula County Recorder's records, W. A. Clark purchased at least the first part of this land in 1899 from a Mr. and Mrs. Robert Cobban.

[15] Marcossin, Isaac F., Anaconda, (New York: Dodd, Mead & Company, 1957), p. 103.

Early Transportation

Early transportation into the Swan-Clearwater Valley was primitive at best. The U. S. Geological Survey map of 1899 (see Figure 2) shows two main trails coming into the area: one, an improved trail, entered the Clearwater Valley from the southeast, extending from Ovando, which was a U. S. Forest Service headquarters, to Woodworth, Dills, Morrell, Holland (ranches or settlers' homes) and terminating near Lion Creek in the Swan Valley. Here the improved trail became an unimproved trail. It continued north beyond Swan Lake. Horse drawn vehicles could be accommodated on the improved trail but the unimproved trail was considered to be adapted only to pack outfits.

The Homestead Act of 1911 proved to be responsible for the first major road improvement. In 1912 the homesteaders in the Swan Valley constructed a passable wagon road into the Valley. This was followed in 1913 by the large Forest Service timber sale to the Somers Lumber Company.

> When Swan Lake first began to develop there were no roads for travel. The Somers Lumber Company ran a steamboat from the foot of the lake where they operated a warehouse on the present C. F. Kelley place, to the head of the lake and a warehouse that was located on the A. K. Millet land.[16]

The Somers Lumber Company was also responsible for bringing the first railroad to the Swan Valley. One description of the coming of the railroad is as follows:

> The Shay engine (locomotive) was floated by barge from Somers across Flathead Lake to the [Swan River]. Then tracks were laid for the engine on the west side of the river and horses were used to pull it as far as the foot of Swan Lake. From there it was floated by barge

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[16] Flint and Paul, op. cit. p. 31.

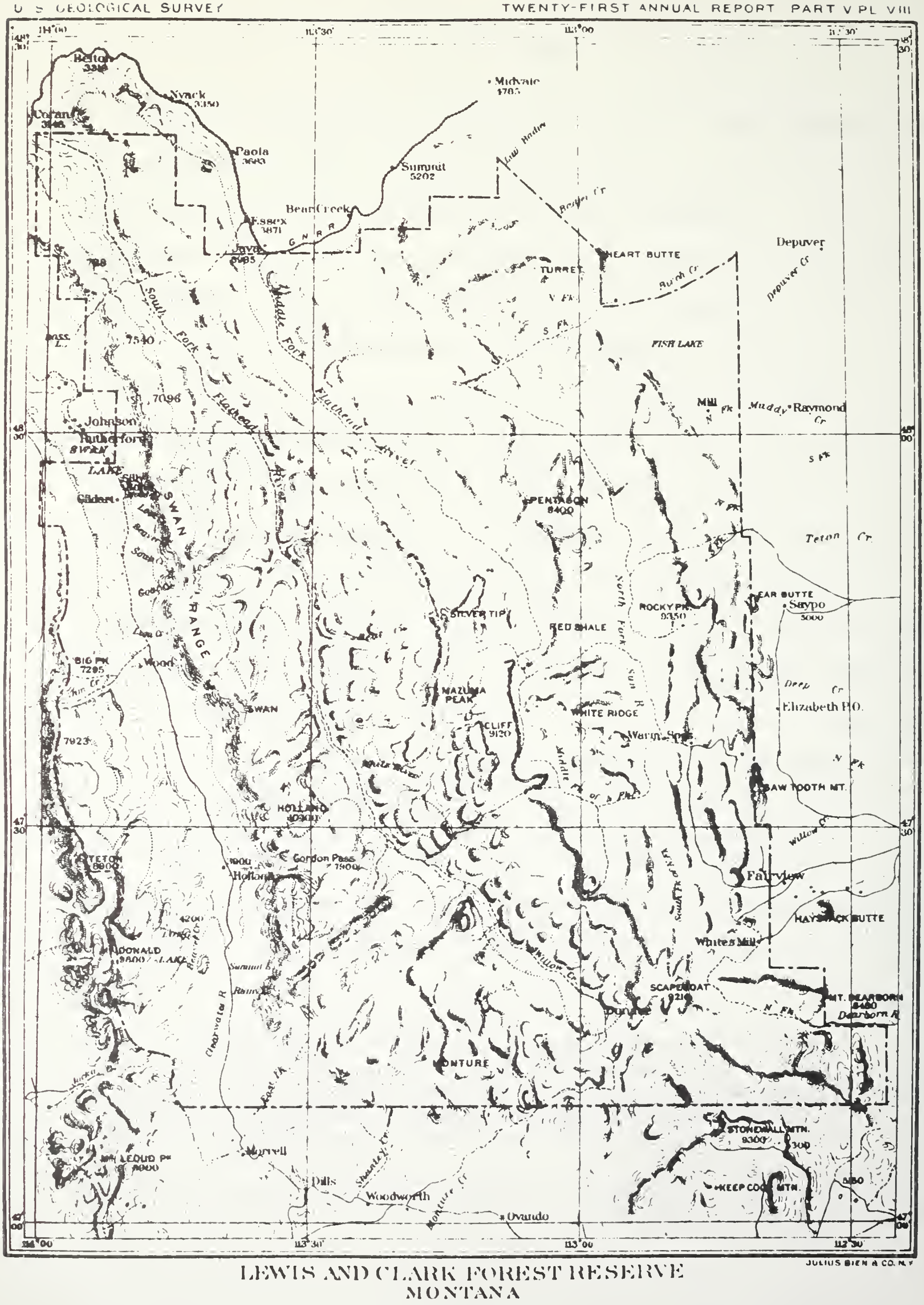

Figure 2

Map of the Swan-Clearwater Valley in 1899 Showing the Trails into the Area at That Time

> again to the head of the lake where the company's headquarters was located. The rails and flatcars were brought up on the ice.[17]

From these historical accounts it is quite apparent that Swan Lake was an important part of the Valley's transportation system. In the winter, what was called an ice road was constructed across the ice connecting the extreme ends of the lake. A V-plow was used to clear the road across the ice. By plowing in this manner the ice along the roadway became deeper and froze more solid so in the spring when the ice went out the road usually remained longer than the rest. Some years the ice road was still visible in the middle of July.[18]

The Somers Lumber Company, which logged in the area from 1914 to 1919, employed several means of transporting its harvest of logs. For some time it operated five camps in the Swan Lake area. Camps One and Two transported their logs by railroad; Camp Three employed scoot roads; Camp Four built dams and flooded Lost Creek, then floated the logs to Swan River, and Camp Five was located so the company could skid the logs directly into the river.[19] Whatever means of transportation was used, the logs found their way to Swan Lake where they were floated across the lake, down the Swan River and then to Flathead Lake where they were assembled into booms. These booms were then towed to Somers by steam tugs.[20]

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[17] Trippet and Bain, _op_. _cit_., p. 59.

[18] _Ibid_., p. 60.

[19] _Ibid_., p. 59.

[20] _Ibid._, p. 41.

Over the five year period in which the Somers Lumber Company operated in the area it removed approximately 100,000,000 board feet of lumber. In 1919 the Company moved out taking everything with it. Apparently road improvement came rather slowly after the Somers Company's departure. In 1922 the Swan Valley road situation was summed up as follows:

> The present road is only a wagon track winding through the timber and is impassable for an automobile, although cars have with great difficulty reached Holland Creek from the south. This, however, was accomplished in dry weather under favorable conditions. The road is the result of trail development, largely by donations work from the settlers with a small amount of financial aid from the counties and the Forest Service.
>
> Missoula County has attempted,at a large expense, to maintain a passable wagon road for light traffic between Selley Lake [sic] and Holland Creek. Very little grading has been done and no permanent improvements made, owing to poor location. Adverse grades and sharp turns prevail. The roadbed is narrow, sloping transversely and is not safe for a load over a ton. From Holland Creek to Goat Creek, there is little more than a circuitous wagon track cut through the timber by settlers.
>
> Creek crossings were made by dropping logs across the streams and flooring these with poles. These are unsafe even for light loads. Grades in numerous cases exceed 20% with abrupt turns at ends.
>
> Until 1917, no road connection was available between Lion Creek and Swan Lake. Previous to this time the Summer [sic] Lumber Co., had constructed logging roads between Swan Lake and Cilly Creek. In 1917, the settlers with the help of the Forest Service and Flathead County, cleared the timber out of the old horse trail and did sufficient grading on the steepest portions between Cilly Creek and Lion Creek to accommodate a light loaded wagon.
>
> The entire project is now passable with a wagon although dangerous, the structures being safe for only about a ton. The grades vary from 12 % to 25% and mud holes are numerous, no drainage being provided. . . .[21]

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[21] U. S. Bureau of Public Roads, Swan Lake folder, January 1923 to Present, Helena, Montana.

To the south, in the Clearwater portion of the Valley, as has been mentioned, there was less early homesteading, but logging began there in 1907. This consisted of horse logging with the timber being cut in the summer months and decked in the woods. Logging sled roads were then constructed and in the winter months, when the snow was on the ground, the logs were skidded by log sled to Seeley Lake. Then when the spring break-up came the logs were driven down the Clearwater River into the Blackfoot and on to the mill at Bonner. The last big drive of this kind took place in 1911. Water transportation here apparently proved to be more difficult than in the Swan drainage. Adequate water supply was one of the problems. To get sufficient water to sluice the logs down the river a dam had to be built at the south end of Seeley Lake, backing up the water to flood stage, then releasing it at once.

Adequate water was only one of the problems. Donald MacKenzie, who was on the last log drive in 1911, says that it took three weeks to get the logs through Salmon Lake. A strong southwesterly head wind kept floating the logs back into the lake, preventing them from spilling into the final stretch of the Clearwater before it meets up with the Blackfoot. To overcome this they had to finally construct a boom across the lake and with teams of horses pulling on either end of the boom they were finally able to force the logs into the river below. Another major problem in the river was that of logs jamming up which might take weeks to untangle and get moving again.

The last of the river drives was followed by railroad logging, and the railroad gradually extended deeper into the logging areas as the trees were harvested. In 1911 the Milwaukee Road ran a railroad from Bonner to Potomac where the Anaconda Company (which had purchased the Blackfoot Milling Company) logged the country south of Potomac. In 1918, with the logging in the area around Potomac completed, the Milwaukee Road pulled up a section of the railroad, from MacNamara to Potomac, and in 1926 constructed one north extending beyond MacNamara to Ninemile Prairie. From here the Anaconda Company ran 18 miles of railroad into the Elk Creek country to Reynolds City, an old mining town. In 1934 the Milwaukee extended its railroad to Cottonwood, now called Sperry Grade and in the same year the Anaconda Company constructed a railroad from the Milwaukee railroad another 16 miles to Cottonwood Lakes which lie to the north of Woodworth. This section of railroad was abandoned in 1949 when logging went to trucks. According to Donald MacKenzie, 1949 was the end of railroad logging in this part of the country.

In 1910 the commercial traveler entering the Clearwater Valley from Missoula would ride a four-horse stage driven by Walter Cameron to the first stop at Potomac. A change of stages there would take him to Clearwater Junction over Sunset Hill.[22] This, in 1910, was the end of the stage line. From Clearwater Junction the traveler was then dependent upon the supply wagons of the Anaconda Company. From 1907 to 1911 the company maintained three logging camps on Seeley Lake which were supplied by two four-horse teams and wagons. The supply wagons made one round trip a week to Bonner for supplies. The road they traveled from Clearwater Junction north went over Sperry Grade to Woodworth then west by Fish Lake where the road again turned north to Seeley Lake.

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[22] Clearwater Junction was at the junction of the Clearwater River with the Blackfoot River, not the road junction as Clearwater Junction is known today.

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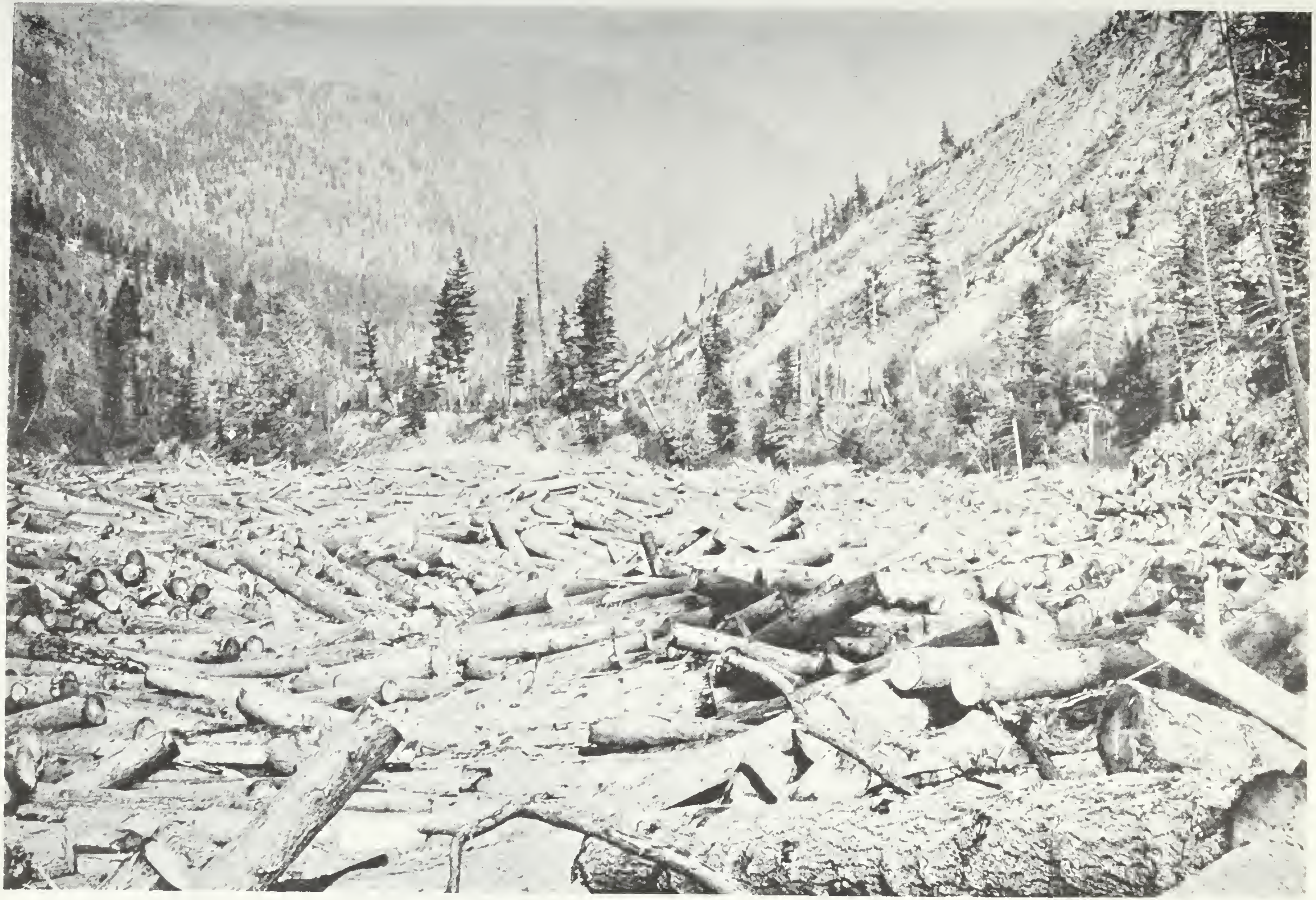

JAM OF LOGS IN BLACKFOOT RIVER.

SOURCE: Annual Report of the Department of the Interior, 1900.

Ellen Deegan recalls that her first trip from Missoula into the upper Swan River Valley in 1913 took her six days by covered wagon. It was about this time that the first automobiles made their appearance in the area. But motor vehicle travel for some time was hazardous at best. Ellen Deegan remembers that motor cars could not get beyond a place called Corlett, a stage stop above Salmon Lake on property now occupied by the Double Arrow Ranch. From there into the upper Swan River travel was by team and wagon.

Dr. W. E. Thieme in 1915 made one of the first trips around Salmon Lake by wagon following pretty much the route of the present day Swan-Clearwater Highway. He recalls that in places the road was on such a slant that three men including himself had to stand on the uphill side of the wagon to prevent it from tipping over and rolling down the hillside. It wasn't long, however, until the road was improved by the county. Dr. Thieme remembers that in the fall of 1915 a Reo and a Ford automobile made the same trip around Salmon Lake without incident.

Perhaps the principal reason the road developed so quickly is that Missoula County officials felt a need to justify themselves. Early in 1915 by legislative action they acquired approximately four townships of land extending from the Cottonwood Lakes to the Elk Creek area from Powell County for which Missoula County paid $10,678.50. "The said sum being the value of the property in roads, bridges, and other improvements owned by said Powell County within the limits of the territory." [23]

For some time the businessmen of Missoula had been pressuring for a shorter route into the Seeley-Swan area, and as a result of their lobbying efforts, the County purchased the land so the road could be constructed. Dr. Thieme, who later became the road supervisor, remembers clearing the right-of-way for the road. He says that no survey was made. The County officials left it up to his partner and himself as to where the road should run.

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[23] Laws, Resolutions and Memorials of the State of Montana Passed by the 14th Regular Session of the Legislative Assembly (Helena, Montana: State Publishing Co., 1915).

Early residents of the area remember the grade going into Salmon Lake as Hoodoo Hill:

> The road was terrible. It pitched right off into the lake. Often it was impassable. The hillside would slough off and you would have to dig your way through.[24]

The roads leading into Seeley Lake from the south were somewhat better right after World War I, but even in the '20's travel was quite an experience. In the winter the trip was made by sleigh. Cars were left at Clearwater Junction and then a covered horse-drawn sleigh took travelers up the Valley. In the late '20's it was considered a record if motorists made the trip from Swan Valley to Missoula and back in a day's time. North of Seeley Lake a strip of road was referred to as the "Dirty Little Pitch" because it was so difficult to get through without getting stuck. Even as late as 1946, when the English report was written, the road from Big Fork to the Clearwater Junction was considered to be unimproved.

> None of the mileage from Big Fork to the Junction with Federal-aid Route No. 24 has been constructed to standard. Part of the Federal-aid Secondary mileage has been improved to a low standard by the counties on Route 15, but the entire Forest Highway section can be classified as unimproved.[25]

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[24] Personal interview with Mrs. Ellen Deegan, Seeley Lake, Montana, September, 1966.

[25] J. F. English, Economic and Traffic Analysis and Design Requirement on Swan River Forest Highway Route No. 15, (Federal Works Agency, Public Roads Administration, Division Eight, Highway Planning Survey, May, 1946), p. 3.

English reported that even without the advantages of an improved road, there was still considerable tourist traffic in the summer from all of the surrounding cities.[26] If tourists liked the area well enough to travel under these conditions, obviously there was a justification for bringing a highway into the Swan-Clearwater Valley which was up to today's standards.

Early Economic Activity

With the exception of a few fur trappers and an occasional prospector there was little economic activity in the Swan-Clearwater Valley until the Forest Service made its first major sale of timber in August of 1907. At that time a government sale contract was awarded the Big Blackfoot Milling Company to log 50 million feet of saw timber from 5,440 acres of land located on the east side of Seeley Lake. By the end of 1909, 47,738,000 feet of timber had been scaled from this sale.[27] The entire operation was logged with horses. The logs were transported to Seeley Lake, then floated down the Clearwater and the Blackfoot rivers to the mill at Bonner, Montana.

The first timber sale of importance in the Swan River drainage was to the Somers Lumber Company on January 3, 1913. It covered an area of some 9,000 acres around the south end of Swan Lake. Here, during the period from 1914 to 1917, 52 million board feet were cut. A second sale extending over an area of 5,719 acres cut out an additional 34 million board feet over the next two years.[28]

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[26] Ibid., p.1.

[27] U.S. Forest Service Timber Management Plan, Missoula Working Circle, Lolo National Forest, Region 1, Montana, 1959, p. 26.

[28] U.S. Forest Service Management Plan, Swan Valley Working Circle, Flathead National Forest, Region 1, Montana, 1960, p. 39.

Outside of this lumbering activity and very limited agricultural activity there was little early economic development in the Valley. Ayres, in his 1900 U. S. Geological Survey Report, felt that commercially, agriculture within the Valley would never be important. He stated that vegetables, small fruits, and hay, perhaps some grain would grow first only in a small way and even then only because it would be difficult to import them from the outside because of transportation difficulties. At that time he felt that there were about 200 square miles in the Valley that were smooth enough to be arable. On the subject of grazing he counted about a dozen small prairie openings in the Valley with probably 500 acres of upland and the same area of slough. "...but hay is plenty [sic] and a few cattle may be kept with some care."[29]

Unlike many areas of Montana around the turn of the century there was no mining in the area and even to this day, except for a few gravel pits, there has been little mineral resource development. As has been noted in the section on early settlement there was early realization of the recreational possibilities of the Valley. The interest of Butte's mining magnates in the area gave the Valley added prestige as a location for summer homes.

Economic activity of the Valley, even to this day, can be summed up as revolving around lumbering and recreation. The English report written in 1946, commenting on the importance of a highway through the Valley, stated that it would largely benefit four types of traffic: forest administration, recreation, logging and general. On recreation he noted that even without the advantages of an improved road there were many recreational facilities and establishments throughout the area. He mentioned that "...in addition there are several expensive summer homes owned by residents of states as far away as New York."[30] Our own conclusion, after looking over these historical trends is that the Swan-Clearwater Highway will play its most important economic role in the area of recreation and forest product production.

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[29] Annual Report of the Department of Interior 1900, op. cit.

Land Ownership Pattern

A study of the land ownership in the Swan-Clearwater Valleys reveals that there are two unusually large land-holders--the U. S. Forest Service and the Northern Pacific Railway Company. Roughly speaking, there are 707,750 acres in the study area.[31] Of this amount the U. S. Forest Service manages approximately 390,700 or 55.2 percent. This land lies within two national forest preserves--the Flathead National Forest and the Lolo National Forest. By far the largest amount is in the Flathead National Forest encompassing the Swan River drainage system. This land lies predominantly along the upper slopes of the Swan and Mission Mountain Ranges. In the Mission Range, over 65,000 acres of this land has been set aside for the Mission Mountain Primitive Area and, as such, is reserved land to be kept predominantly in its natural state. This designation was made in 1939 to provide for "...public education, inspiration, and recreation."[32]

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[30] The figures here are close approximations since the uneven boundary lines make an exact acreage calculation impossible. For the same reason and because of intermingled ownership patterns, the acreage controlled by each type of owner is also a close approximation.

[31] J. F. English, op. cit., p1.

[32] Outdoor Recreation Resources Review Commission, Report No-3, Wilderness and Recreation, (Washington, D. C.: 1962), p. 20.

The section of the Lolo National Forest which lies within the study area is in the Clearwater drainage. Its acreage is substantially less than that of the Flathead; most of it lies along the Upper Clearwater and to the east of the Swan-Clearwater Highway.

The second largest single landowner is the Northern Pacific Railway Company. Within the study area the Company owns approximately 147,900 acres or about 20.9 percent of the total. The Northern Pacific holdings were acquired as a result of an act approved by Congress in 1864 which provided for the construction of a railroad from a point on Lake Superior to a point on Puget Sound.[33] To aid in the construction of the railroad, land on either side of the track within specified limits was granted to the Northern Pacific Railroad Company. All of the company's land in the study area except for some very small scattered parcels is located south of Swan Lake. It extends from about eight miles south of Swan Lake to the southern boundary of the study area. The land was originally acquired in alternative sections and most of it is still in this checkerboard arrangement. In certain areas there has been some exchange of Northern Pacific land--most of it with the U. S. Forest Service. As a result of this exchange, there is one large solid block of more than a township of land just east and north of Seeley Lake.

The third largest landowner is the Anaconda Company which holds an approximate 57,450 acres or 8.1 percent of the land within the study area. Almost all of the Anaconda land is south of Seeley Lake.

The fourth largest landowner is the State of Montana, with 55,700 acres or 7.9 percent of the total. Most of this acreage is made up of the Swan State Forest to the south of Swan Lake. The balance of the state land is in small parcels scattered around the southerly end of the study area.

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[33] Charles Donnelly, The Facts about the Northern Pacific Land Grant, p. 1. Available under title at University of Montana Library.

Table 1

Land Ownership in the Swan-Clearwater
Valley Study Area by Ownership Classes

LAND OWNER	ACRES OWNED	PERCENT OF TOTAL
U. S. Forest Service	390,700	55.2
Northern Pacific	147,900	20.9
Anaconda Company	57,450	8.1
State Ownership	55,700	7.9
Other Ownerships	56,000	7.9
TOTAL	707,750	100.0

The four largest landowners then control 651,750 acres out of the total 707,750 acres in the study area, or 92.1 percent of the land. The balance of the land ownership is mixed, but is largely made up of small private holdings such as ranches, farms and the like. This narrow pattern of land ownership places the use and development of the land resources within the area in very few hands. This fact alone certainly places restrictions on the economic development of the Swan-Clearwater Valley. As a result, the economic impact of Montana 209 will in large measure be determined by how these major landowners manage their resources.

The Area Today

Except for Highway 209 and the businesses attracted as a result of its construction, the Swan-Clearwater Valley today is not far different than it was prior to the construction of Montana 209. The livelihood of the Valley is still primarily dependent upon recreation and timber production. These two sectors of economic activity have formed the base for the service and trade industry of the Valley. The relative isolation of the area, the small population and the land ownership pattern have discouraged any substantial economic development. The Valley is even more isolated because it is some distance from the principal population centers of the state, but more probably because it falls outside of the principal transportation routes between the major population centers. In fact, some people still regard the area as primitive. A recent article which appeared in Field and Stream described the Valley as a "drive-in wilderness." The author, an outdoor writer, describes the area:

> ...I have found a wilderness with a paved road running spang through the middle that is far from ruined and with reasonable care and respect it never will be. The place is a camper's and angler's paradise...
>
> My wilderness lies in the northwest part of Montana, east and south from Flathead Lake. Here a wild stretch of mountains,

> forests, streams, and unnumbered lakes lies on either side of a road that runs southeasterly from Big Fork, Montana, for about a hundred miles to meet Highway 20 at a corner called Clearwater. Some call it Swan Road; others call it Seeley Lake Road. On the map it is Highway 209.[34]

Writers and resort operators claim the Swan-Clearwater Valley to be the last main stronghold of native cutthroat and Dolly Varden trout fishing in the United States. The country not only is relatively uninhabited (it has only two concentrations of population of any size along the 87 mile route, Seeley Lake and Big Fork with an estimated 500 residents each), but much of it lies between the Bob Marshall Wilderness Area to the east and the Mission Mountains Primitive Area on the west. Thus, if the center of the Valley should not be considered primitive, the Highway 209 traveler is still only a few miles away from the wild areas. So in this respect, the title "Drive-in Wilderness" accurately describes the Valley today.

Summary

The foregoing sections have been designed to present the geographical and historical background of the Swan-Clearwater Valley. In general, this part of the study attempted to form a backdrop against which we could analyze the influence of Montana 209 on the area. It seems safe to say from the foregoing description that the economic growth of the Valley has been slow. Its resource development has been largely limited to two sectors: forest management and production and outdoor recreation, both

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[34] Byron W. Dalrymple, op. cit., p. 122.

An unnamed lake east of
Seeley Lake in the Bob Marshall Wilderness Area.

U. S. Forest Service

of them inexorably linked together. The Valley, prior to the construction of Montana 209, can be described as being rather primitive and except for three or four communities, largely unpopulated. Montana 209 has brought some changes to these conditions which will be examined in the following sections of this report.

Chapter III

The Swan-Clearwater Highway

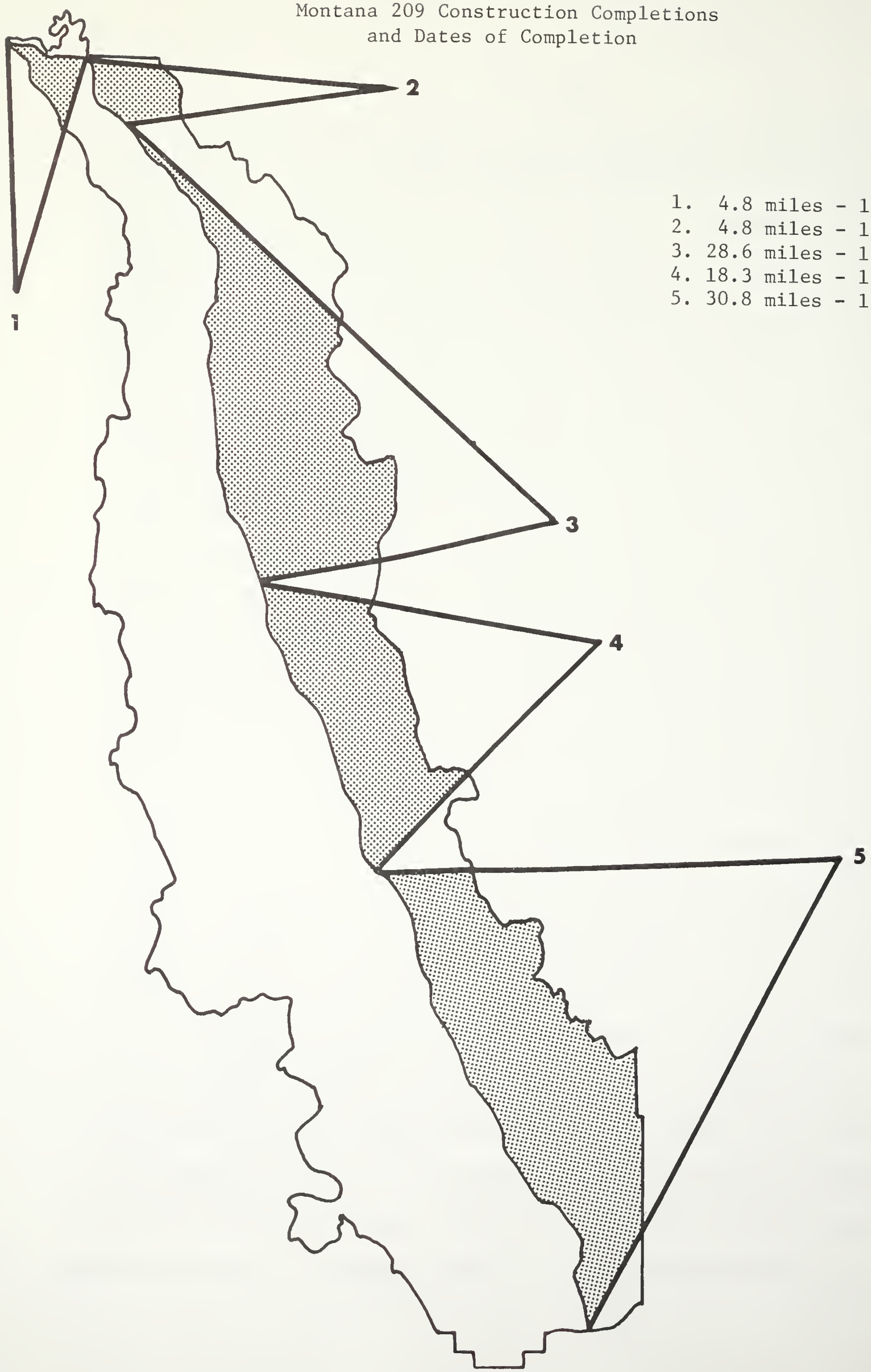
Construction Pattern

As mentioned in our general introduction, one feature of the Swan-Clearwater Highway which makes the evaluation of its impact upon the Valley difficult to ascertain is the fact that the highway was constructed in five different sections over a twelve-year span of time. Construction of the highway began in 1952 and was ultimately completed in 1964; the various sections of the highway and the year each section was completed appear in Figure 3. In 1952, a 30.8 mile stretch was constructed beginning at State Route 20, the present day Clearwater Junction, and extending north approximately 15 miles beyond the community of Seeley Lake. Not until 1958 was a second section of the highway begun when a 28.7 mile strip was completed. This section of road did not start from the termination of the first completed section, but skipped a distance of 18.3 miles. This 28.7 mile portion of the highway constructed in 1958 extended from a point 1.4 miles north of the Missoula County line to the boundary of the Flathead National Forest. In 1959 the 18.3 mile link of roadway between the two completed sections was constructed. By the end of 1959 the Swan-Clearwater Highway extended 76.8 miles north from the starting point at Clearwater Junction.

In 1962 the highway was extended another 4.9 miles to where it connected with State Highway 326, a paved route which in turn connects with State Highway 35, 2.1 miles north of Big Fork. The 1962 completion was significant because then for the first time a completely paved route passed through the Swan-Clearwater Valley. It was particularly important for those

Figure 3

Montana 209 Construction Completions and Dates of Completion



1. 4.8 miles - 1964
2. 4.8 miles - 1962
3. 28.6 miles - 1958
4. 18.3 miles - 1959
5. 30.8 miles - 1952

motorists who wished to enter the Valley from the Kalispell-Columbia Falls-Whitefish area to the north. This route, however, bypassed the community of Big Fork. In 1964 the final section of the Swan-Clearwater Highway was completed, making it possible for motorists to travel directly from Big Fork through the Swan-Clearwater Valley on a paved road. It also marked the completion of the 87.5 mile Swan-Clearwater Highway.

Other Highways and Roads in the Area

Except for the connecting highways (Montana 326 and 35 to the north, and Montana 20 to the south) there are no highways other than Montana 209 within the study area. There is a paved road leading from the Swan-Clearwater Highway to Holland Lake and a short section of pavement from Highway 209 traversing the south edge of Seeley Lake. Otherwise the secondary road system is unpaved. The data derived from 1965 base maps indicate an approximate total mileage of 1,540 miles of roads and trails within the Swan-Clearwater Valley. This mileage consisted of approximately 90 miles of paved, all weather roads; 390 miles of graded dirt roads; 270 miles of primitive roads and 790 miles of trails.

An interesting aspect of this part of the study would be to relate the development of other roads in the area such as logging truck roads and the like in the area to the development of the highway. However, no attempt was made to pro-rate these other road mileages by years for the period 1950-1965. The necessary data for any such pro-rating are unavailable for many individual years, and available records do not contain the detailed data required for such an analysis. In this study, then, it seems appropriate to merely list the road mileage that is currently in existence.

The importance of other roads in the area varies a great deal. Some are used extensively, such as the route from Seeley Lake to Woodworth and on toward Ovando and the road westward from Seeley Lake which exits the study area near upper Jocko Lake and follows the Jocko River down to terminate near Arlee. In the Ferndale area there are several roads that are used frequently by the residents of that area. Of course, during the summer months the access routes leading into and around the lakes and to the other recreational areas have considerable traffic. Logging trucks, depending upon the area where timber cutting is taking place, make use of both improved and unimproved roads.

Primarily, the basis for the development of the road system within the study area has been the need for recreational and timber management access. Naturally the users of these roadways are predominantly in search of recreation, or are involved in dealing with the timber resources of the area. We can assume that the basic impact of Montana 209 on the area's road system was primarily that it provided easier access which could in turn lead to better development and a more extensive utilization of these roads.

Traffic Flow Data

One of the principal indicators of the importance of any transportation system is the amount of traffic that it carries. On Montana highways it is a common practice to conduct periodic or continuous traffic counts to determine the amount of utilization. These traffic counts may be of two kinds: manual, where the traffic is counted and classified by individuals employed for this purpose; or automatic, where mechanical counters perform the counting. These automatic counters are placed at strategic points along the highway and can remain in continuous operation or may operate for periodic intervals depending upon the traffic data desired. A deficiency of the automatic counter is that it cannot differentiate the traffic flow by type of vehicle; in other words, trucks, cars, trailers all appear alike on the recording device. Another problem is that the automatic counter records the traffic by number of axles passing over it. Thus, a dual rear axled truck will be recorded as a car and a half, and a truck and trailer will be recorded as two four wheeled vehicles or more, depending upon the number of axles. As a result, conversion factors must be applied to the automatic counter traffic data to correct the traffic flow to one common denominator. The manual method, although accurate in recording the type of traffic, does have a deficiency in that usually these visual traffic counts occur during daylight hours and only for a few days at a time. As a result, an expansion factor must be applied to arrive at an estimate of the total traffic flow for the period under investigation.

In analyzing the traffic flow pattern of the Swan-Clearwater Highway, data from both methods of traffic counting have been employed. Historical traffic volume data goes back from 1965 to 1950 to even before the time of the initial construction of the Swan-Clearwater Highway; these are data that have been derived largely by the use of automatic counters. However, the data illustrating the current composition and flow of traffic on the highway were obtained manually. An explanation of this manual counting procedure and the method of arriving at the total traffic flow is given in detail in the section entitled Traffic Pattern in 1966.

Traffic Pattern 1950 to 1966

The yearly average traffic flow on the Swan-Clearwater Highway has shown a fourfold increase in the last 16 years (1950-1966).[35] The flow of traffic doubled between the years 1950 and 1957 and then more than doubled again between 1957 and 1966 (as shown in Figure 4). Except for a very few years there has been a constant increase from one year to the next. Inasmuch as the highway was completed in sections, it is only natural to attempt to determine what effect each section completion had upon the traffic flow. Statistics alone do not clearly indicate the impact of each of these completions; however, the traffic flow for the project completion years of 1952-58-59 and '62 did increase substantially over the traffic of the year prior to the construction completion. This was particularly true for the years 1958-59 and '62. However, the year 1964, when the final section of the highway was completed, showed a slight decline in average traffic flow. The explanation for this decline probably is the 1964 flood which caused extensive damage to several highways and impaired travel in this vicinity during the tourist season. The important point that these data reveal is that the Swan-Clearwater Highway has enjoyed a remarkable rate of increase in utilization.

Perhaps Figure 5 better illustrates the growing importance of the highway.

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[35] The average traffic flow for each year beginning with the year 1950 was computed by averaging the traffic of 11 traffic counting stations along the route. (The locations of these counting stations are shown on the map in the appendix, Figure 1.) The average traffic for each year then served as a base for determining the percentage of increase or decrease in traffic flow for the following year.

Figure 4

Increase in Traffic Flow on Montana 209 for the
Years 1950 through 1966

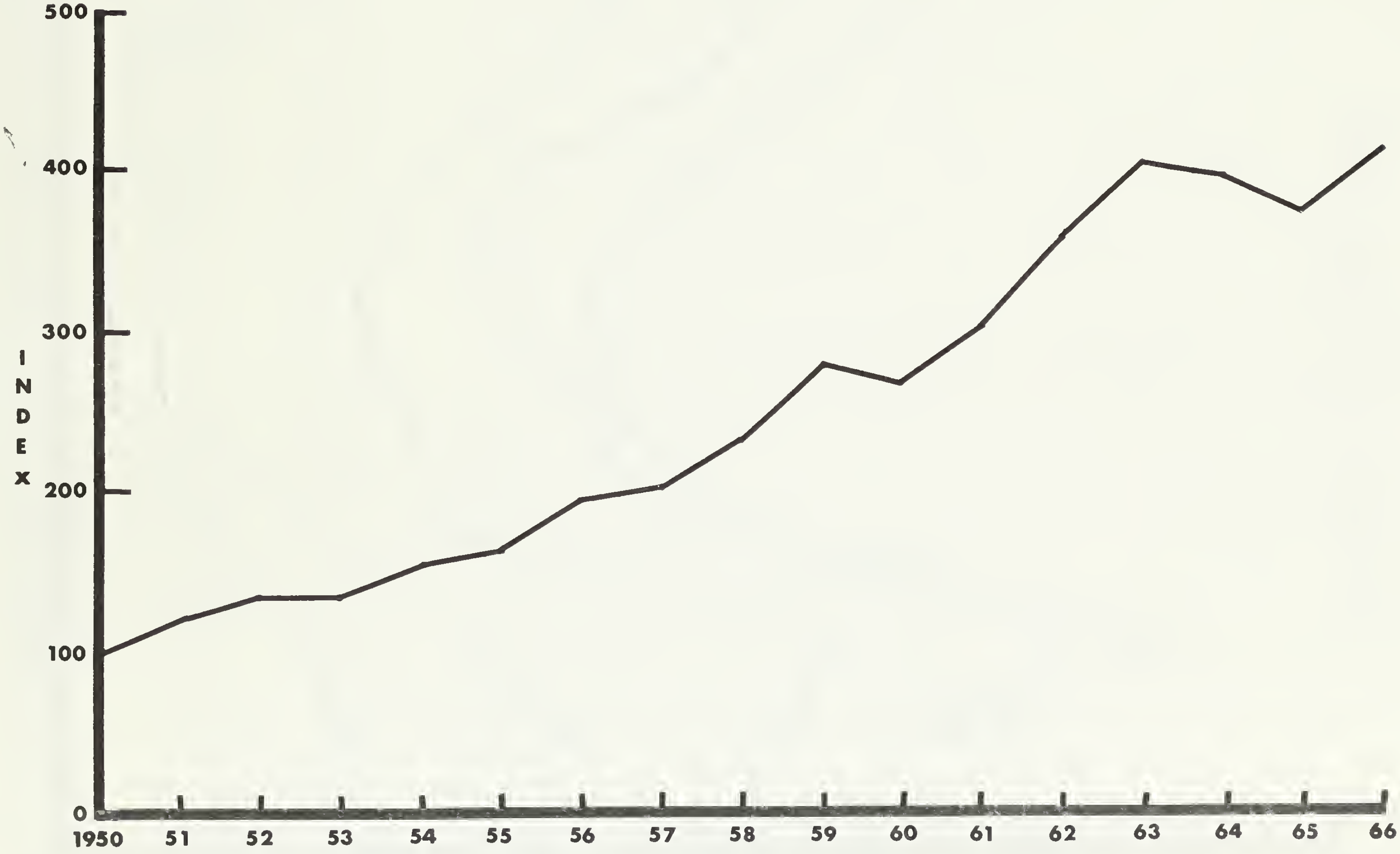
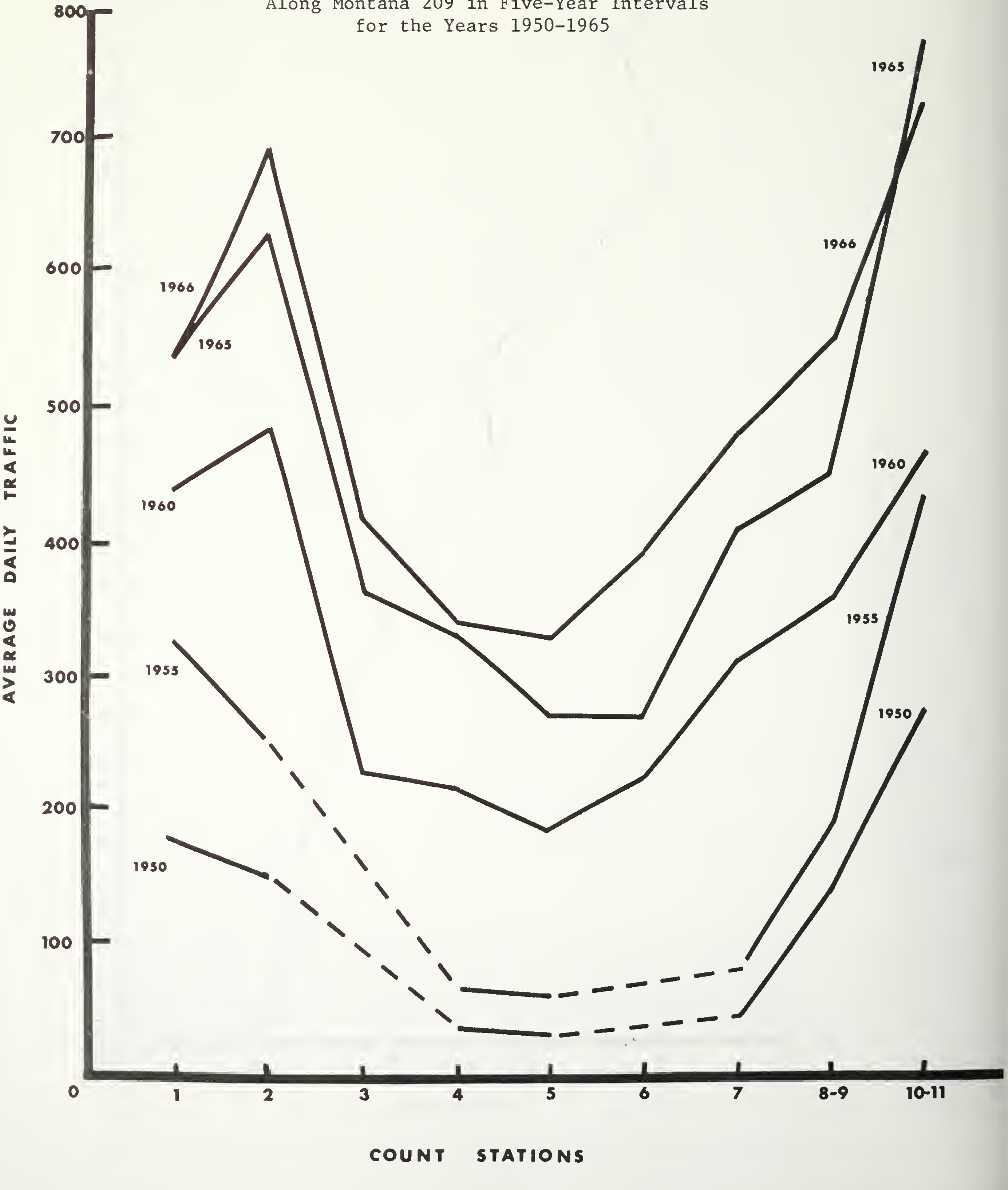


Figure 5

Absolute Traffic Flow at Specific Points Along Montana 209 in Five-Year Intervals for the Years 1950-1965



Here the absolute traffic flow is graphed by five-year intervals at specific points along the route.[36] The graph reveals the rate of traffic increase at selected traffic counting stations beginning at the southerly terminus of the highway and progressing to its ultimate destination at Big Fork. The numbers on the horizontal scale of Figure 5 represent the location of these selected traffic counting stations. Number One is at the lower end of the highway where it meets Montana 20. The next station, Two, is even with Placid Lake, Station Three is located between Lake Inez and Lake Alva, Four is just to the north of the turnoff to Holland Lake, Five is approximately a mile above the Condon Ranger Station, Six is located near where the highway crosses Goat Creek, Seven is at the lower end of Swan Lake, Eight and Nine[37] are a short distance apart on the upper tip of Swan Lake, Ten is just above the crossroad where Montana 209 meets Montana 326 and Station Eleven on the edge of Big Fork just before Montana 209 connects with Montana 35.[38] Not only does this graph illustrate the rate of traffic increase since 1950, but it also points out the general areas of the highway which have the heaviest traffic. The concentration of traffic (with the exception of the immediate Seeley Lake area) is at either end: in the south, the Clearwater Junction-Placid Lake area and to the north, the Ferndale-Big Fork area. Roughly, the traffic flow in the two end areas is twice as great as it is in the center section of the highway. The ratio of increase from the year 1950 to the year 1965-66 however, is approximately the same over the entire route. Between the years 1955 and 1960, the center section of the highway made a particularly substantial gain in traffic flow. It can only be surmised that this increase could be due in large measure to the construction completion of this part of the highway in 1958 and 1959. At the Big Fork end of the highway there was also a marked increase in traffic between the years 1960 and 1965. Here again, this was undoubtedly due to the completion of the final two northerly sections of the highway in 1962 and 1964.

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[36] Here the data represent absolute traffic counts made at five-year intervals at selected traffic stations along Montana 209. The counting stations are the same as those employed in gathering the data for Figure 4.

[37] Station Nine is located on the route that existed prior to the completion of this section of the highway. Station Eight is located on the route taken by the new highway. Traffic volumes were recorded at Station Nine until 1963 when the counters were relocated at Station Eight on the newly completed section of Montana 209.

[38] To get a true picture of the traffic flow at this end of the highway, the traffic counts for counting Stations Ten and Eleven were totaled. The role of Montana 326 as an alternative access or exit route for Montana 209 was the reason for totaling these two count stations.

One point along Highway 209 where high traffic flow occurs and which is not shown by the graph in Figure 5 is in the immediate vicinity of Seeley Lake. Figure 6 compares the Seeley Lake traffic[39] with the average traffic on Montana 209 for the years from 1950 to 1966. As the graph indicates, from the year 1956 to the present, the Seeley Lake traffic has grown at a much faster rate than the highway average. This growth rate was particularly great between 1956 and 1961. As was seen in Figure 5 the traffic near Big Fork, the other major population center of the study area,had a similar marked increase. It is only natural, because of their size in relation to the other communities along the route, to find a considerably greater flow of traffic at these locations. What seems to be most important is the rapid increase in traffic flow.

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[39] The traffic counting stations which provided these data are located on Montana 209 on either side of the community of Seeley Lake.

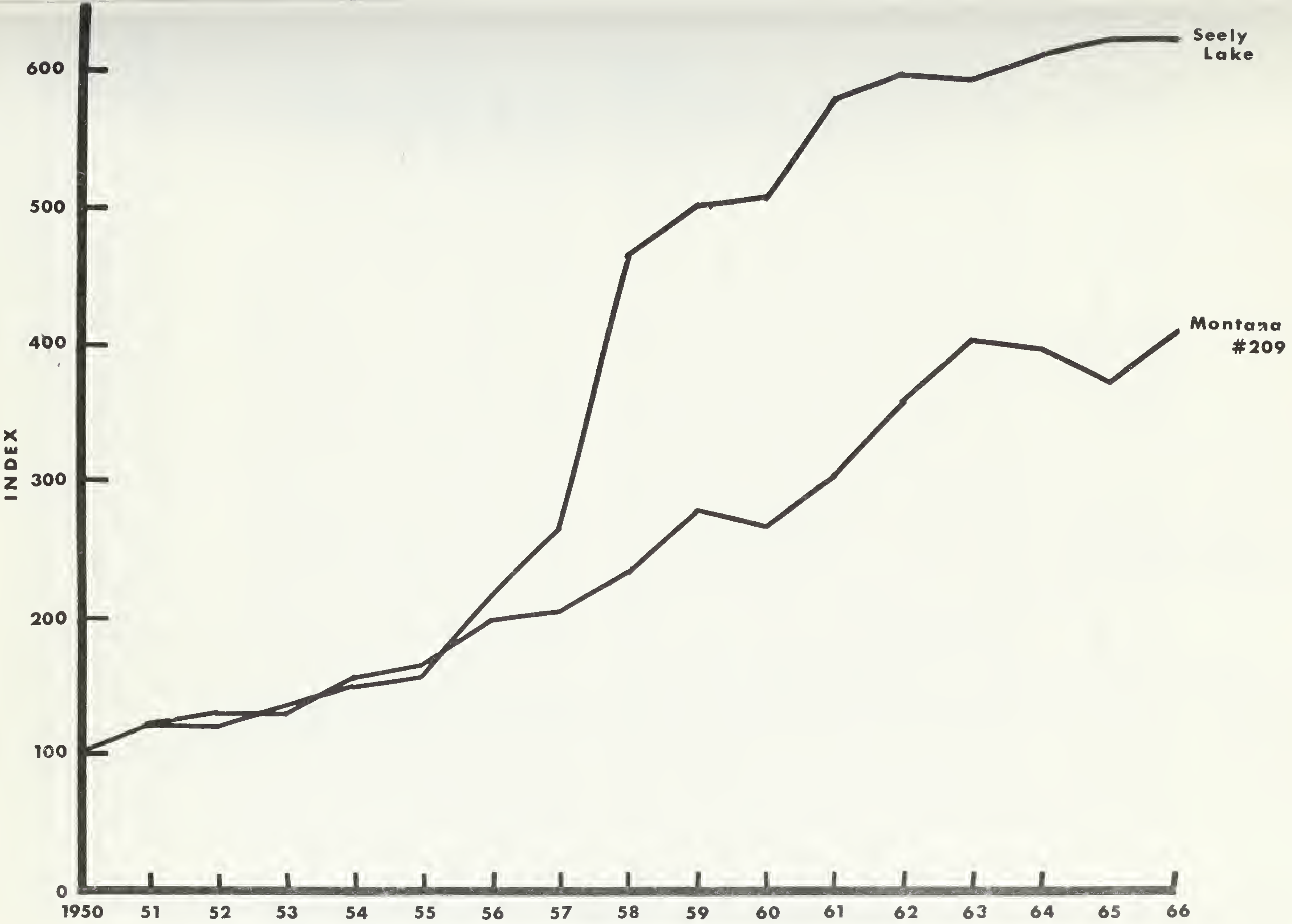

Figure 6

A Comparison of the Yearly Increase of Seeley Lake Traffic with the Yearly Increase of Traffic on Montana 209

This indicates that not only are these two communities the center of activity in the Valley, but that they are also experiencing a more than average growth of activity.

One approach in determining the importance of the Swan-Clearwater Highway as a transportation route is to compare the increase in its rate of utilization with that of comparable highways within the state. This is shown in Figure 7. This graph compares the yearly increase in traffic flow on Montana 209 with that of four comparable highways in Montana[40] and to the yearly increase in traffic on all primary rural routes in Montana. As the graph illustrates, the rate of growth of the traffic on Montana 209 has been, since the year 1954, in excess of the traffic increase on comparable Montana highways and since 1950 considerably greater than that on all primary rural routes.

The growth rate on the Swan-Clearwater Highway was demonstrably greater than comparable routes in the years 1956-58-59 and in the period from 1961 to 1963. Except for 1956 and 1961 this marked increase in traffic coincides with project completion (1958-1959-1962) and adds to the evidence that these particular construction completions were important to the ultilization of the highway. This graph rather vividly illustrates the extraordinary traffic volume increases which have been experienced by Montana 209.

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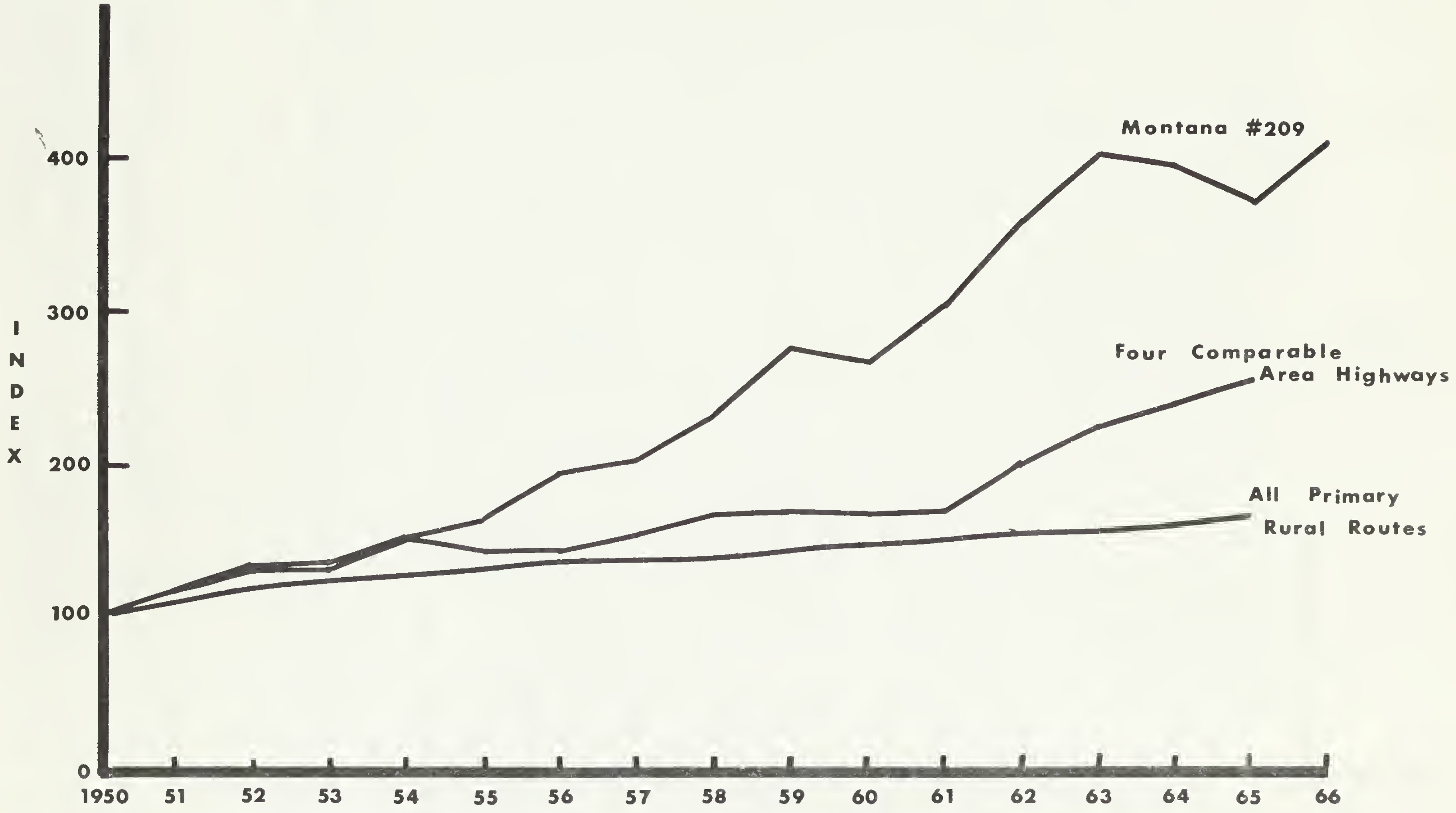
[40] The comparable routes selected were Montana 202 between U. S. Route 2 below Troy, Montana to U. S. 10A; Montana 35 which circles the east side of Flathead Lake; Montana 287 from Raynolds Pass through the Madison Valley and U. S. 12 between Lolo Pass and Lolo, Montana. The highways selected were ones which were considered to traverse the same general type of area as found in the Swan-Clearwater Valley. The traffic counts on these highways were obtained from the Planning Survey Section of the Montana Highway Commission.

Figure 7

A Comparison of the Yearly Increase of Montana 209 Traffic with the Yearly Increase of Traffic on Comparable Montana Highways and with the Yearly Increase of Traffic on all Montana Primary Rural Routes



Traffic Pattern--1966

The current traffic data were collected by the Planning Survey Division of the State Highway Commission during July of 1966. The counts were taken on four weekdays and during two weekends. (The actual count of vehicles taken, the days of the count, and the expansion process are presented in the Appendix.) On the basis of these counts, average weekly summer traffic volume on Montana 209 was estimated at 8,376 vehicles. These counts also revealed that 45.3 percent of the traffic occurred on the weekend, while the remaining 54.7 percent occurred on week days.[41] These data indicate a far heavier flow of traffic on the weekend [day] than on the average week day; yet to really understand the difference it is necessary to break these data down to traffic flow on a day to day basis. When this is done the data reveal that during this summer period the highway carried an average of 960 vehicles on a 24 hour week day and an average of 1716 vehicles on a 24 hour weekend day.[42] These averages illustrate more dramatically the difference in average traffic flow on the weekend day over the weekday. This heavier flow of weekend traffic would indicate that the Swan-Clearwater Valley holds some special attraction for the weekend motorist and makes it seem likely that the composition of the weekend traffic is different from that of the weekday. This aspect of the research is dealt with in the following section of the report.

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[41] The weekend was defined as starting at 5:00 p.m. Friday and ending at 10:00 p.m. Sunday; the remaining time was assigned to weekdays.

[42] These averages were arrived at by dividing the total weekday and weekend period traffic by number of hours within each traffic period and then multiplying by 24, the number of hours in a day.

Characteristics of Highway Users

One of the objectives of the research project was to examine the characteristics of the Swan-Clearwater Highway users. It seemed important to know whether the users were predominantly from the three counties in which the Valley lies, or were from outside the local three-county area; whether they were just passing through the Valley or whether their origin or destination lay within the Valley. Other characteristics to be investigated were the general purposes of a user's trip--business or pleasure; the average size of the motoring party, and so forth.

The data for this aspect of the study were gathered by an origin-destination study carried out by the Planning Survey Section of the State Highway Commission. This was done at the same time the manual traffic counts were taken. During a two week period in July 1966, vehicles were stopped at either end of the Swan-Clearwater Highway by personnel from the Planning Survey Section and the motorists interviewed. In this period of time a total of 2,491 motorists was stopped and questioned. Of these 682 were weekday travelers and 1,809 were weekend travelers.

Highway-User Benefits

Savings to highway users which have resulted from construction of the Swan-Clearwater highway also represent a substantial economic benefit. These savings may be classified into two principal categories: (1) the savings which the highway users have enjoyed as the result of being able to travel on the new improved bituminous highway in place of the original substandard roads with earth or gravel surfaces, and (2) the savings which have resulted through distance savings provided by use of the Swan-Clearwater highway as compared with longer alternate routes between origins and destinations which would have provided the best travel routes in the absence of the Swan-Clearwater highway.

The lack of funds has made it necessary that the improvement of the Swan-Clearwater highway be accomplished in short construction projects extending over many years in the past. Each project which improved the highway over the previously existing condition resulted in a significant savings to the highway user; however, the absence of detailed traffic data in earlier years and the extensive variation in the types of improvement made in past years makes it very difficult to evaluate with reasonable precision the savings which have accrued to the highway users during the long period of improvement of this highway. For these reasons, no attempt has been made to calculate the amount of such savings.

The second type of savings involving shorter travel distances between origins and destinations as provided by the Swan-Clearwater highway as compared with alternate travel routes can be evaluated adequately on the basis of special traffic surveys which were made as part of this overall study. These origin-destination traffic surveys provided data concerning trip origins and destinations for travelers using the Swan-Clearwater highway and permitted the computation of the mileage savings provided by use of the shorter Swan-Clearwater highway as compared with alternate highway routings between these origins and destinations.

The number of miles of travel saved for passenger cars and trucks were computed separately and were expanded to an annual basis. Although there are minor differences in grades and curvatures between the Swan-Clearwater highway and alternate routes, the differences were considered to be insignificant in computing costs per vehicle-mile of travel, so the same composite figures of $.1245 for passenger cars and $.3554 for trucks were used for both the Swan-Clearwater highway and the alternate routes.

The tabulation on page 54 shows the computations for travel costs via the Swan-Clearwater highway as compared with alternate routes. The results show a savings of $69,408 per year.

General Characteristics of Swan-Clearwater Valley Motorists

Some of the general characteristics of summer motorists are summarized in Figures 8, 9, 10 and 11. A majority of the motorists (67.8 percent)[43] were what is termed as local travelers: either their destination or origin was within the Valley. In breaking down the traffic flow by vehicle registration the data revealed that 45.2 percent of the motorists drove vehicles registered within the local three-county area--Lake, Flathead, and Missoula counties; 38.3 percent of the vehicles were registered in other Montana counties and 16.5 percent had out-of-state registration.

In answer to the question regarding their trip purposes, the majority of the motorists (69.1 percent) cited recreation or pleasure; most of the rest indicated business or work (30.6 percent). The motorists in general drove passenger cars (89.2 percent) and the average number of persons per vehicle was 2.6. These general characteristics of summer travelers may be misleading because of the fact that the weekday travelers displayed some

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[43] These percentages were arrived at by taking the actual number of interview responses and applying the weighting factor of .547 to the weekly data and .453 to the weekend data. These two figures were then totaled and used as the week period traffic from which the above percentages were derived. As has been pointed out, .547 percent of the total traffic is weekday and .453 is weekend traffic, thus the reason for using these percentages as weighting factors.

ANNUAL ROAD USER BENEFITS
SWAN-CLEARWATER HIGHWAY
1966

	VIA SWAN-CLEARWATER				VIA SHORTEST ALTERNATE				
	DISTANCE (MILES)	PASS CARS	TRUCKS	TOTAL	DISTANCE (MILES)	PASS CARS	TRUCKS	TOTAL	TOTAL SAVINGS
Avon or East - Big Fork Jct or North	148				185	MISSOULA			
Average Daily Traffic		18	2	20		18	2	20	
Annual Vehicle Miles		972,360	108,040			1,215,450	135,050		
Cost Per Vehicle Mile		$ 0.1245	$ 0.3554			$ 0.1245	0.3554		
Annual Travel Costs		$121,059	$ 38,397	$159,456		$151,324	$ 47,997	$199,321	$ 39,865
Drummond or South - Big Fork Jct. or North	141				152	MISSOULA			
Average Daily Traffic		6		6		6		6	
Annual Vehicle Miles		308,790				332,880			
Cost Per Vehicle Mile		$ 0.1245	$ 0.3554			$ 0.1245	$ 0.3554		
Annual Travel Costs		$ 38,444		$ 38,444		$ 41,444		$ 41,444	$ 3,000
Lincoln - Big Fork Jct or North	131				258	MISSOULA			
Average Daily Traffic		4		4		4		4	
Annual Vehicle Miles		191,260				376,680			
Cost Per Vehicle Mile		$ 0.1245	$ 0.3554			$ 0.1245	$ 0.3554		
Annual Travel Costs		$ 23,812		$ 23,812		$ 46,897		$ 46,897	$ 23,085
Great Falls - Big Fork Jct	216				229	US 89 & 2			
Average Daily Traffic		3	1	4		3	1	4	
Annual Vehicle Miles		236,520	78,840			250,755	83,585		
Cost Per Vehicle Mile		$ 0.1245	$ 0.3554			$ 0.1245	$ 0.3554		
Annual Travel Costs		$ 29,447	$ 29,020	$ 57,467		$ 31,219	$ 29,706	$ 60,925	$ 3,458
Average Daily Traffic		31	3	34		31	3	34	
Annual Travel Costs		$212,762	$ 66,417	$279,179		$270,884	$ 77,703	$348,587	
Annual Savings									$ 69,408

Figure 8

Percentage Distribution of Montana 209 Traffic by Type of Traffic (through or local), Summer, 1966

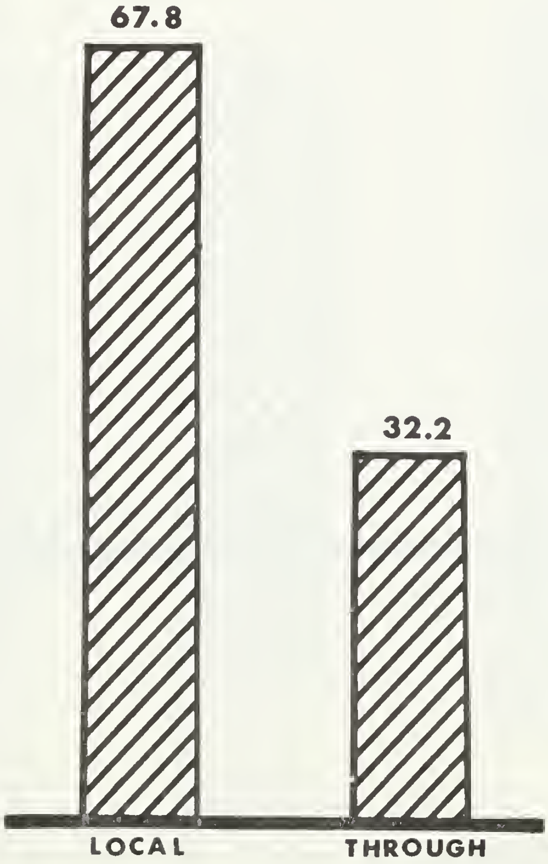


Figure 9

Percentage Distribution of Montana 209 Traffic

by Place of Vehicle Registration, 1966

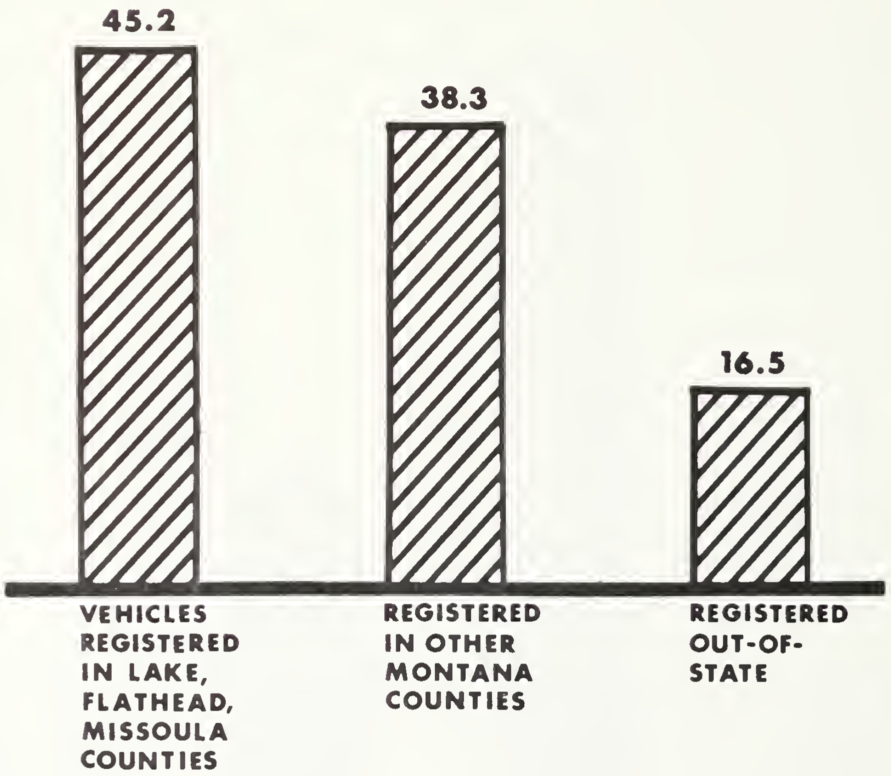


Figure 10

Percentage Distribution of Montana 209 Traffic
by Trip Purpose, Summer 1966

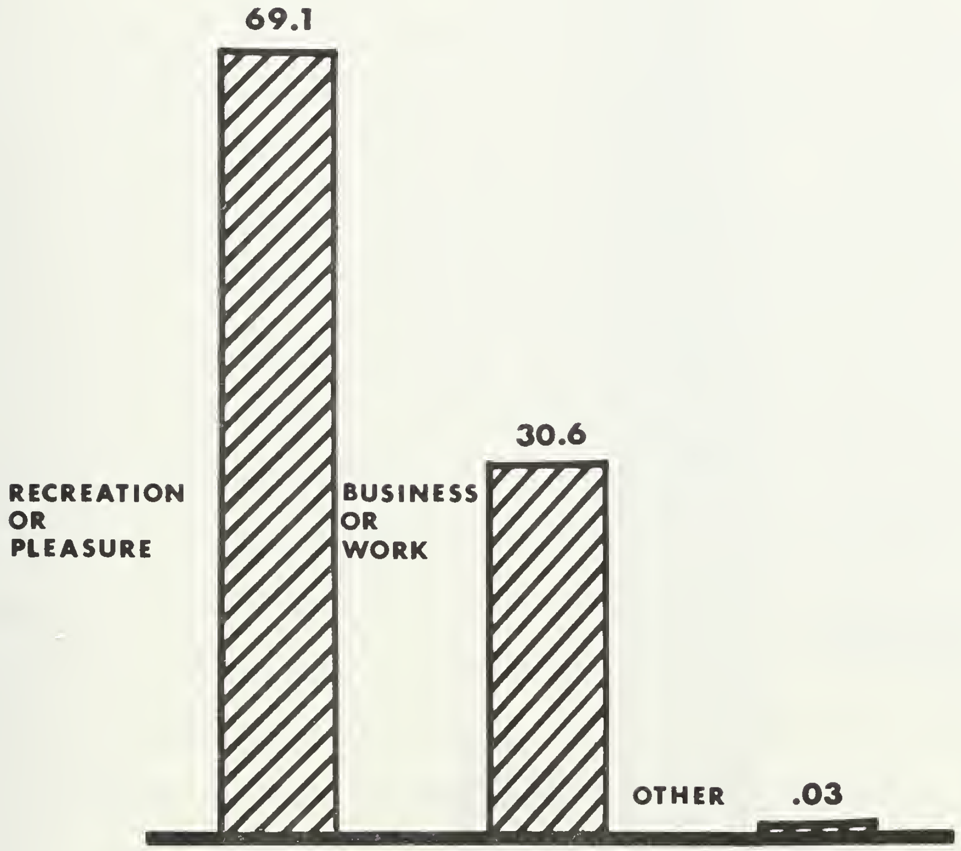
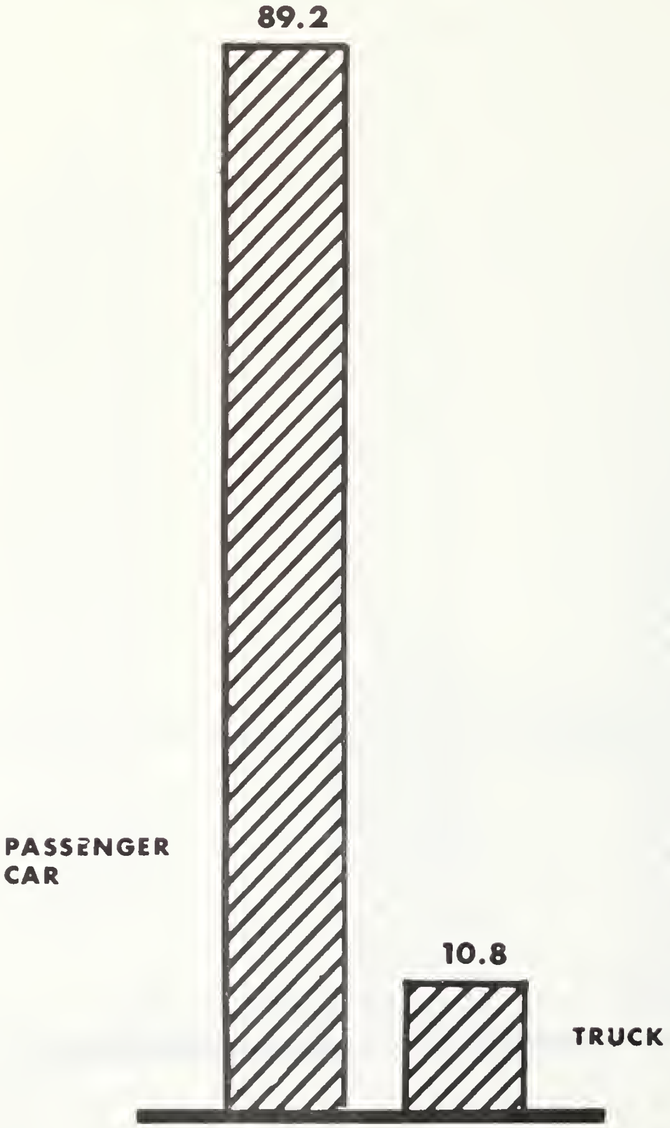


Figure 11

Percentage Distribution of Montana 209 Traffic
by Type of Vehicle, Summer 1966



what different characteristics than the weekend travelers. For this reason the weekday and weekend traffic was for the most part analyzed separately.

Analysis of Type and Registration of Traffic

Figures 12 and 13 show the composition of weekday and weekend traffic by vehicle registration and by the type of traffic: through traffic or with destination or origin or both within the Valley (designated as local traffic). For example, as illustrated in Figure 12, 47.1 percent of the weekend traffic was registered within the local three-county area (Lake, Flathead and Missoula counties) and of this three-county area traffic, 83.5 percent represented local traffic, while 16.5 percent of the motorists were traveling through the Valley. Vehicles registered in Montana counties outside of the three-county area made up 32.7 percent of the weekday traffic--55.2 percent local, and 44.8 percent traveling through the Valley. The remaining 20.2 percent of the weekday traffic was composed of vehicles registered in other states with 52.9 percent of them local motorists and 47.1 percent through motorists. Figure 13 provides the same information by vehicle registration and type of traffic for the weekend. In comparing the weekday data with that of the weekend two main points stand out: the highway is utilized to a greater percentage by the local three-county area traffic on weekdays than on weekends, and the greater proportion of traffic for both time periods is of the local type regardless of the place of registration.

Figure 12

Percentage Distribution of Weekday Traffic on Montana 209
by Vehicle Registration and by Type of Traffic
(through or local). Summer, 1966

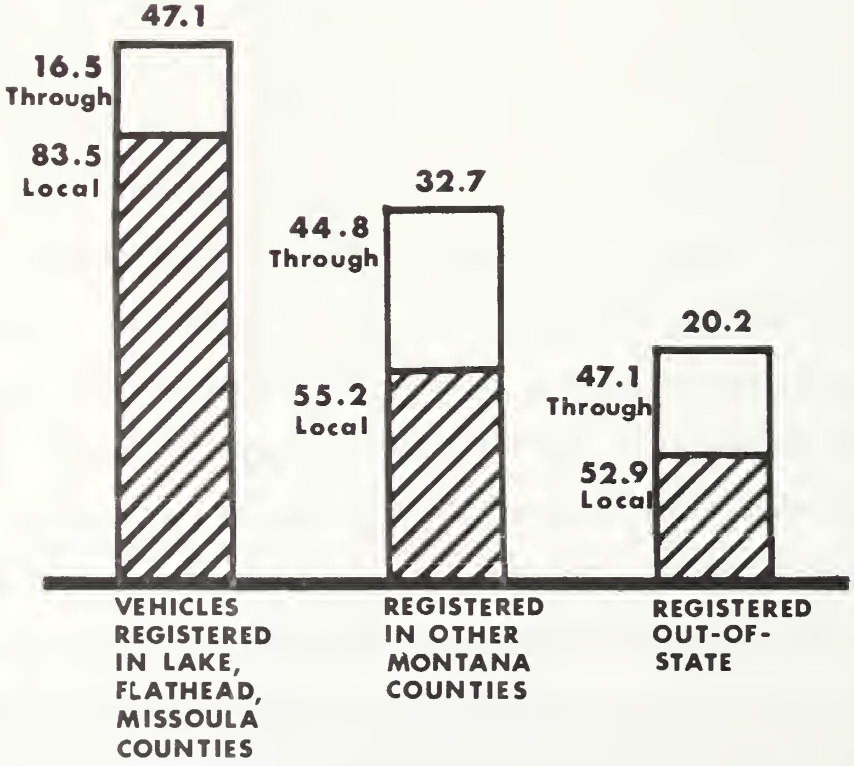
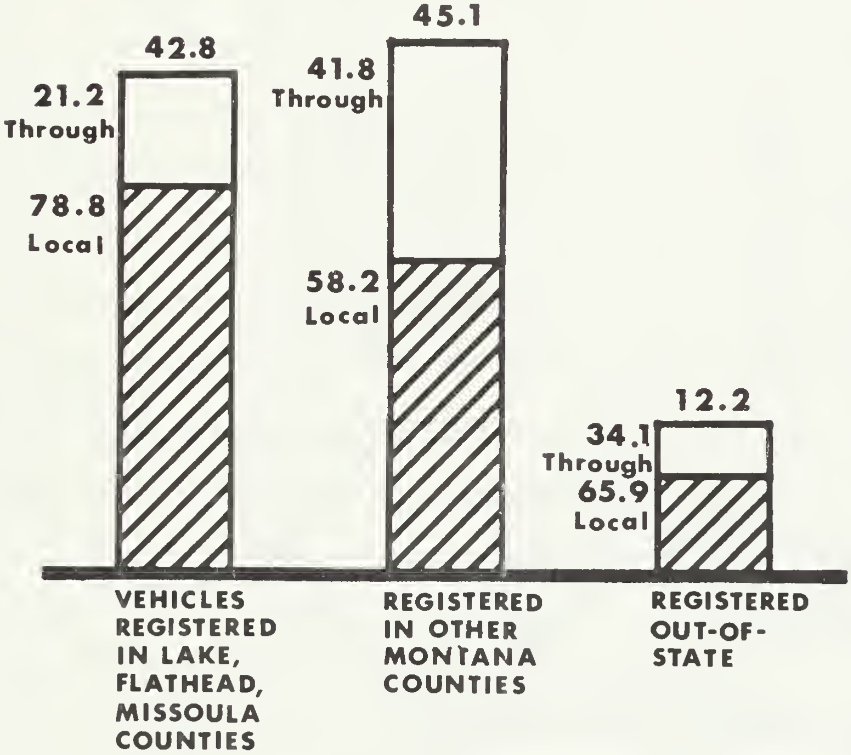


Figure 13

Percentage Distribution of Weekend Traffic on Montana 209 by Vehicle Registration and by Type of Traffic (through or local), Summer, 1966



Analysis of the Source of Montana Registered Vehicles

As the majority of the Swan-Clearwater Valley traffic is made up of vehicles registered within the state it seemed appropriate to determine the distribution of these vehicles by regional areas of the state. The map illustration in Figure 14 presents this information. It reveals that over 70 percent of the traffic, whether it be weekday or weekend, is composed of vehicles registered in either the northwest or north central part of Montana. The next largest percentage of the traffic comes from out-of-state. Considering the proximity to the study area and the amount of population in the northwest and north central regions of the state, it is easy to understand why the majority of traffic originates in these two areas. What may seem somewhat peculiar is that with the amount of population and the area's relative nearness to the Valley the Anaconda-Butte region doesn't supply a greater percentage of motorists to the traffic flow on Montana 209. This may be due to lack of good easy access roads from this area to the Swan-Clearwater Valley.

Analysis of Trip Purpose of the Traffic

Figures 15 and 16 break down the traffic by trip purpose and place of vehicle registration for weekdays and the weekend. Figure 15 reveals that the largest percentage (64.4 percent) of the weekday travelers from the local three-county area vehicles are business or work oriented while the other two vehicle registration categories are predominantly recreation or pleasure oriented.[44] As Figure 16 illustrates the pattern of trip purpose

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[44] The response "visiting relatives and friends" was considered as falling into the recreation or pleasure category.

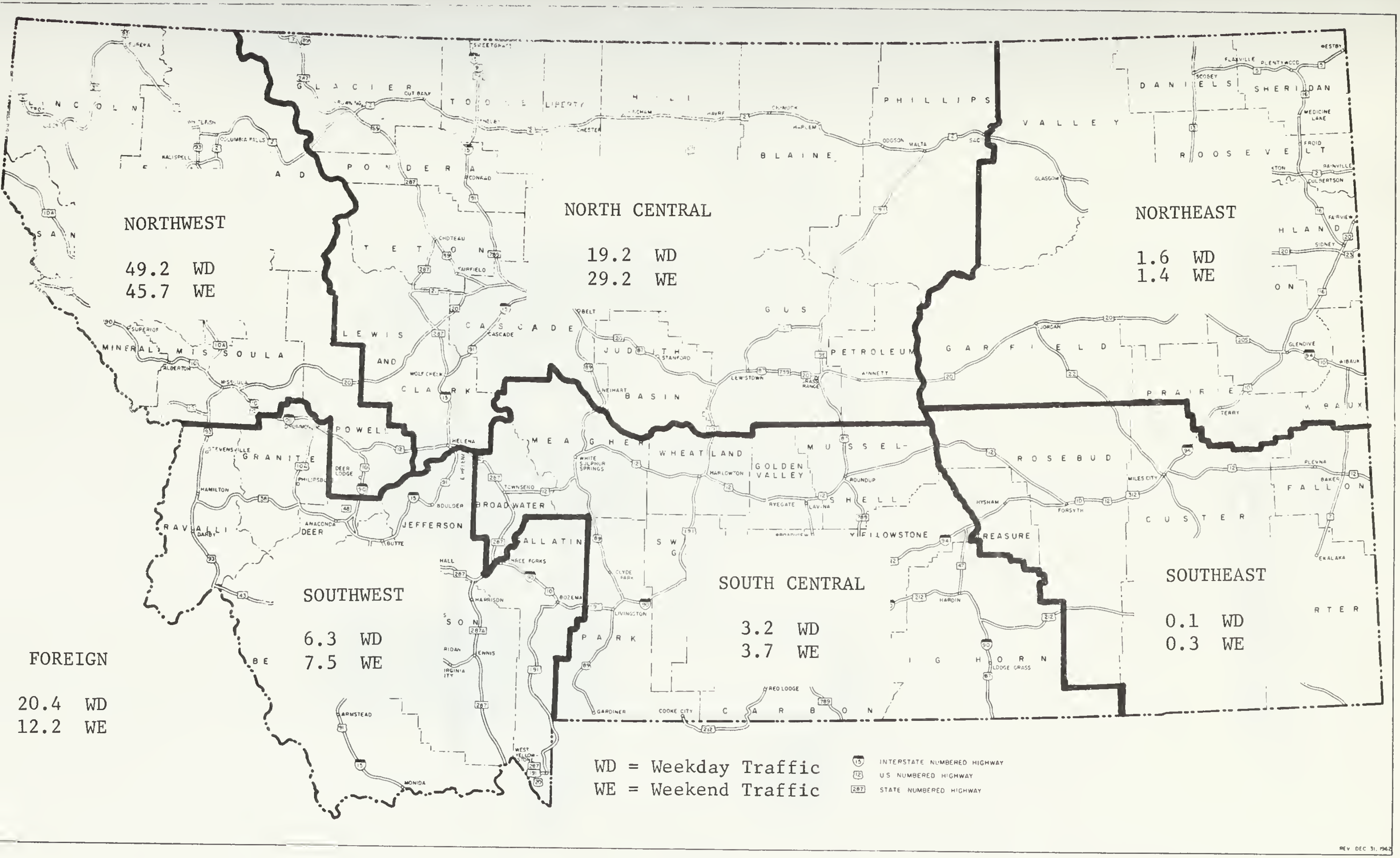


Figure 14

Percentage Distribution of Montana 209 Traffic by Region and by Vehicle Registration for Weekdays and Weekends, Summer, 1966

Figure 15

Percentage Distribution of Montana 209 Traffic by Trip Purpose and Vehicle Registration for Weekdays, Summer, 1966

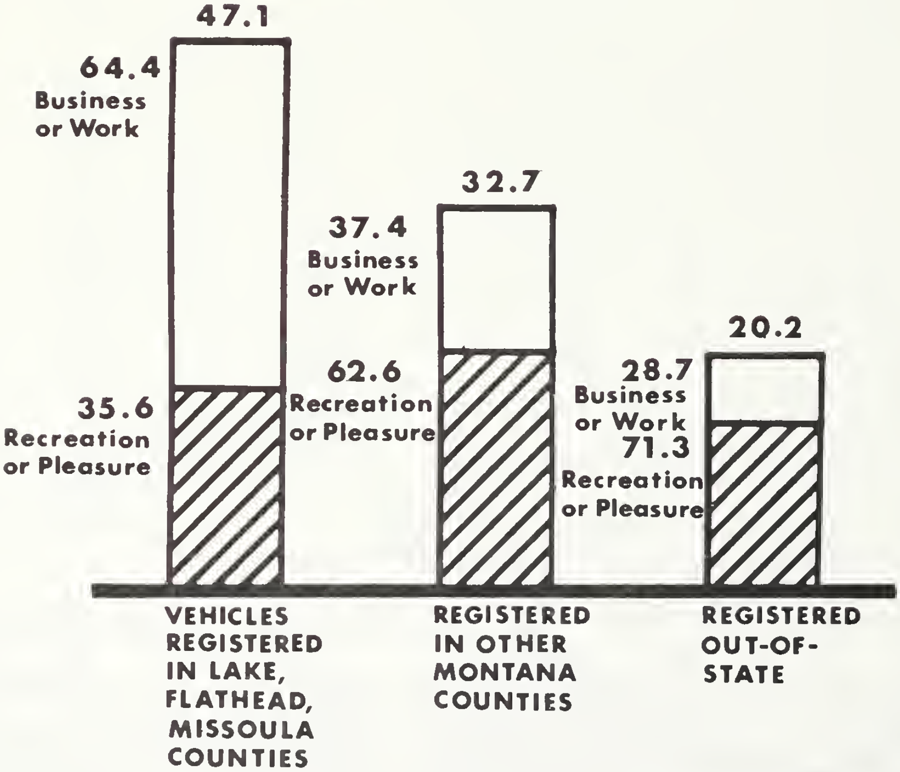
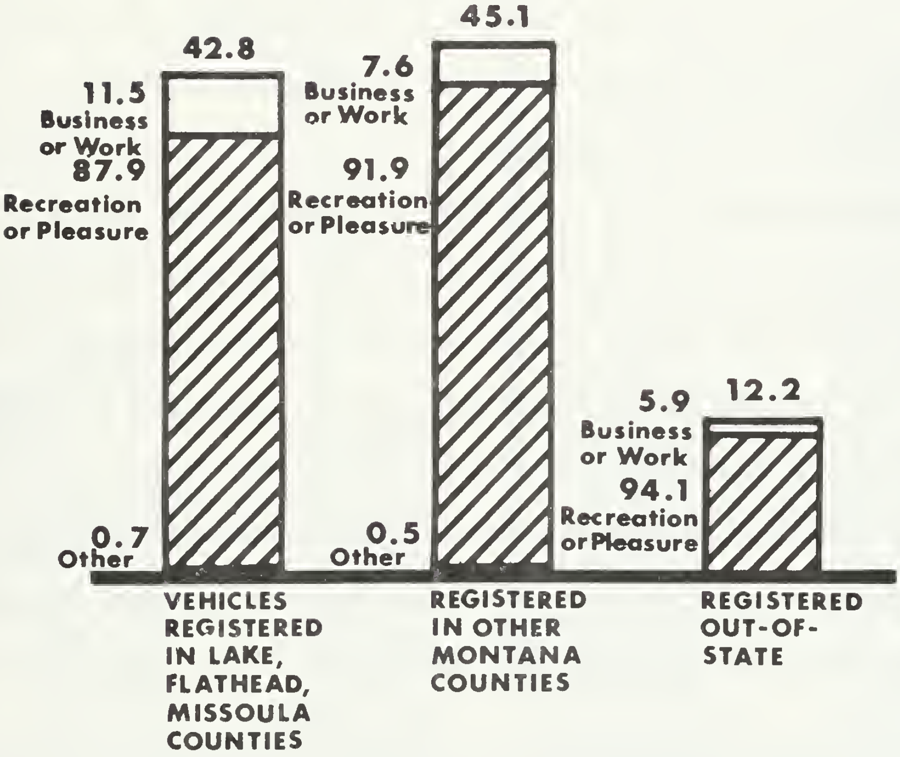


Figure 16

Percentage Distribution of Montana 209 Traffic
by Trip Purpose and Vehicle Registration for
Weekends, Summer, 1966



changes considerably on the weekend when the majority of all the motorists regardless of vehicle registration is pleasure or recreationally oriented.[45]

Figure 17 illustrates the distribution of weekday and weekend traffic by type (through, local) and by trip purpose. Here it can be seen that 70.2 percent of the through weekday traffic is recreation and pleasure oriented while the local weekday traffic is considerably more business and work oriented with 57.2 percent of the motorists reporting business or work as their trip purpose. On the other hand, the weekend traffic, whether it be of the through or local type, is predominantly recreation or pleasure oriented.

Analysis of Traffic by Type of Vehicle

Another aspect of the study was to determine the makeup of the traffic by the type of vehicle--passenger cars or trucks--and what proportion of each was through traffic and local. Figure 18 presents these findings. As might be expected, both during weekdays and the weekend, passenger cars were predominant. However, trucks made up a sizeable portion (23 percent) of the local weekday traffic. This is undoubtedly due in large part to the number of logging trucks which operate in the Valley during the working hours of the week. On the weekend trucks made up a very minor part of either the local or through traffic.

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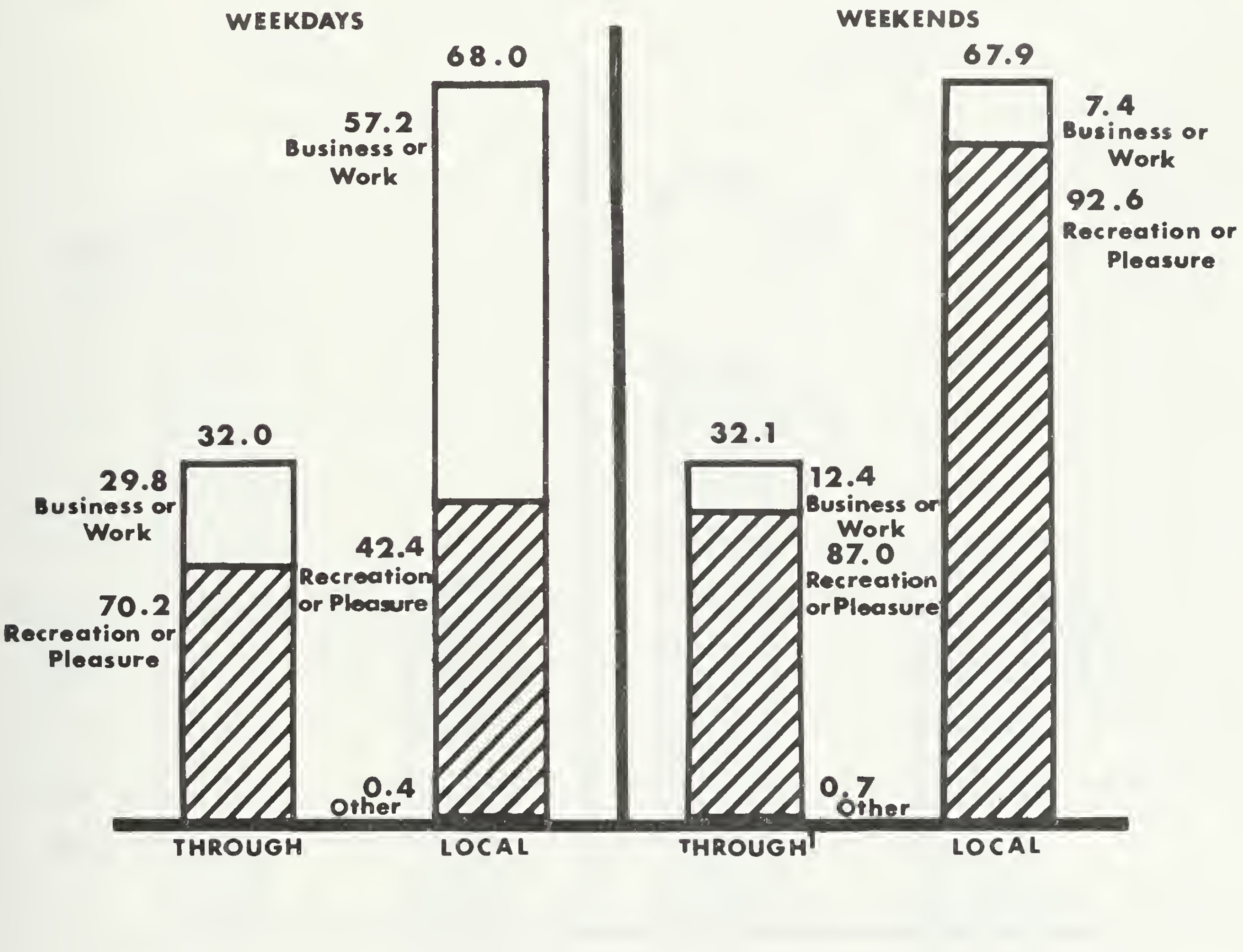
[45] An analysis of the traffic of the various regional divisions of the state by vehicle registration and by trip purpose for the weekday travelers and the weekend travelers is presented in the Appendix, Figure 2.

Figure 17

Percentage Distribution of Montana 209 Weekday and Weekend Traffic by Type of Traffic and Trip Purpose, Summer, 1966



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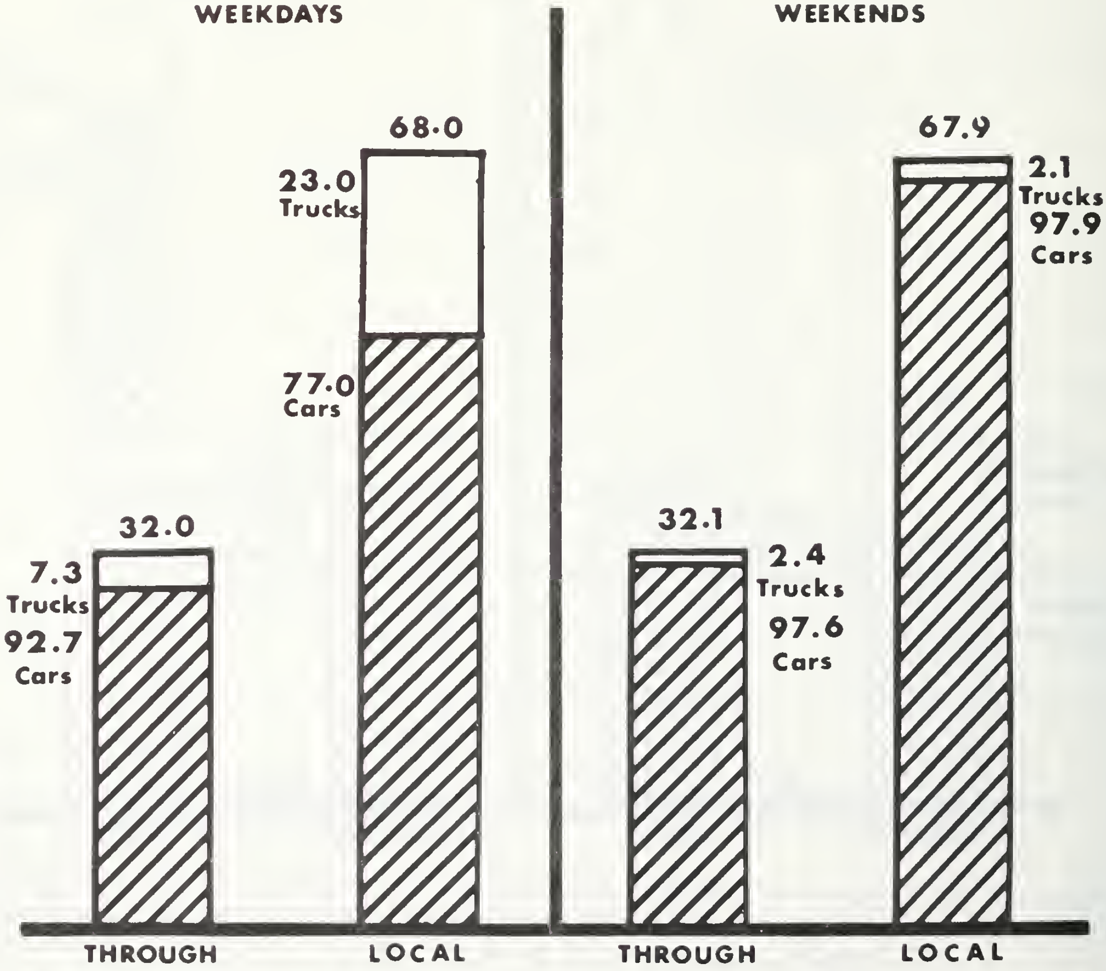
[1] Percentage total = 100.1 due to rounding.

Figure 18

Percentage Distribution of Montana 209 Traffic by Type of Traffic and by Type of Vehicle for Weekdays and Weekends, Summer, 1966



Analysis of the Origin and Destination of the Traffic

As the name implies, an origin and destination study was carried out by the Planning Survey Section of the Montana Highway Commission in an attempt to ascertain the origin and destination of the motorists interviewed for that particular day on which the study is conducted. Tables 3 and 4 which follow present the major findings of this part of the study. Both on the weekdays and on the weekends the majority of the traffic originated in the local three-county area (Missoula, Flathead, and Lake counties). Cascade, with the state's largest population center of Great Falls, and Lewis and Clark, containing Helena, were the next most important counties of traffic origin. Missoula County far outranked the other counties in importance for both origin and destination of the day's traffic, particularly on the weekends. This indicates the importance of the Swan-Clearwater Valley as a recreational area for Missoula based motorists.

In comparing the origin and destination data with that of the place of vehicle registration, it was noted that a considerable discrepancy existed. Many of the motorists did not originate or end their trip in the county (or state) in which their vehicles were registered. This indicates these motorists in visiting the Swan-Clearwater Valley make it a part of at least a two or three day trip. One may presume from this that these motorists not only visited the Swan-Clearwater Valley, but also other adjacent areas, too.

One question asked by the interviewers was in regard to the motorist's last stop. The overwhelming majority of them stated that their last stop had been within one of the three local counties. This was also true for the motorist's planned next stop. Almost without exception the data of the origin

Table 3

Percentage Distribution of Origin of Traffic on Montana 209 by County for Weekdays and Weekend, Summer, 1966

WEEKDAY		WEEKEND	
COUNTY OF ORIGIN	PERCENT OF TRAFFIC	COUNTY OF ORIGIN	PERCENT OF TRAFFIC
Missoula	34.9	Missoula	45.0
Flathead	30.5	Flathead	19.9
Lake	13.6	Lake	11.2
Lewis and Clark	5.9	Cascade	7.4
Cascade	4.7	Lewis and Clark	6.6
Remainder	10.4	Remainder	9.9
TOTAL	100.0	TOTAL	100.0

Table 4

Percentage Distribution of Destination of Traffic on Montana 209 by County for Weekdays and Weekend, Summer, 1966

WEEKDAY		WEEKEND	
COUNTY OF DESTINATION	PERCENT OF TRAFFIC	COUNTY OF DESTINATION	PERCENT OF TRAFFIC
Missoula	37.6	Missoula	42.8
Flathead	19.0	Flathead	19.5
Lake	17.6	Cascade	10.5
Cascade	7.6	Lake	9.9
Lewis and Clark	6.1	Lewis and Clark	6.2
Remainder	12.1	Remainder	11.1
TOTAL	100.0	TOTAL	100.0

and destination study revealed that regardless of trip purpose, time period, type of traffic, or vehicle registration, the local three-county area was the most important source of traffic; Cascade and Lewis and Clark counties followed in importance.

Summary

This section on traffic volume and traveler characteristics indicates that the use of the Swan-Clearwater Highway has been increasing at a rate considerably greater than the rates of comparable Montana highways. The highway is heavily used during the summer months by recreationists, especially on the weekend when the traffic flow is the greatest. The traffic is predominantly composed of travelers who originate from or have as their destination some place within the study area, and most of the travelers are from Missoula, Flathead and Lake counties.

Chapter IV

The Effects of the Swan-Clearwater Highway on Logging and Lumbering Activities

A priori Condition

As has been pointed out in the section on the historical development of the Swan-Clearwater Valley, logging was the first major type of economic activity in the area, beginning with the large U. S. Forest Service timber sales around Seeley Lake in 1907 and later around Swan Lake in 1913. This early activity did not have an apparent lasting impact upon the area, except that it did lead to the development of a skeletal and primitive road system. In general when this first early logging activity died down, the Valley, except for the loss of timber stumpage, was left pretty much in the same state as before. Logging went into a period of decline, but hit its stride again in the 1940's, picking up in volume until it hit its peak in 1964. There are a number of factors which influenced the decline and the rise of logging within the study area. Some of these influences were economic and others had to do with management policies and practices of the major timber land owners. Some of the constraints these large land owners operate under follow.

1. Federal Constraints - The U. S. Forest Service has the responsibility and authority for managing, developing, and protecting national forest lands. This general authorization was clarified legislatively by the Congress of the United States in the Multiple Use-Sustained Yield Act of 1960 (Public Law 86-517). This Act provided for the establishment of a pattern of coordinated resource use on national forest lands. The Act specifically recognized timber, water, wildlife, forage, and recreation as legitimate uses, and provided for their continued production over time

on all nonreserved federal lands.[46] This Act places constraints on private management policies and practices which affect all lands administered by the U. S. Forest Service. Specifically, the concept of sustained yield and allowable cut in timber management is designed to perpetuate or improve the value and vigor of the timber stand and requires that a reasonable balance be maintained between annual growth and annual harvest on all federal timber management units. Small deviations from the norm are allowed on a year-to-year basis, but growth and cut must be balanced periodically--usually every 10 years.

As a result, national forest timber sale programs, harvesting schedules, and marketing patterns are determined by administrative constraints and not primarily by market conditions or the current price of stumpage. Regulation of the forest is on a physical, rather than a value base, although it is a policy of the Forest Service to establish minimum acceptable prices for each of the allowable cut sales made each year. The important point for the purposes of this study, however, is not the pricing of stumpage, but rather the emphasis on selling and harvesting the full allowable cut each year.

Construction of new roads or improvement of existing access will result in an increase in national forest offerings of stumpage only if (a) the forest is not completely under Forest Service management at the time improved access is provided, or (b) a greater utilization of management techniques on forest lands can be realized as a result of the improved access.

Extension of Forest Service management to previously unregulated areas would allow a substantial increase in the amount the Forest Service puts up for annual cut in the years immediately following development of access as accumulated growth was being liquidated. The increase in cut would be temporary and, gradually, accumulated uncut growth would be put up for stumpage sale. The annual cut would then be recalculated and brought into balance with current growth.

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[46] Annual Report of the Chief of the Forest Service to the Congress, United State Department of Agriculture, Forest Service (Washington, D. C., 1965).

Increasing the intensity of Forest Service management would allow moderate, but permanent, increases to be made in the annual cut. Recovery of trees previously too small to be profitable and inclusion of previously submarginal areas in the allowable cut calculations would provide an expanded resource base and an expanded allowable cut.

Both of these programs would, however, be tempered by the ability of the Forest Service to fund an increased timber management program. Insufficient funds for timber management have existed in the past, and may exist in the future. Where funds are lacking, any calculated increase in allowable cut will be restricted regardless of the ease of access. Large sales and liquidation of federal stumpage, for instance, would not be expected. In economic terms, a relatively inelastic short-term supply curve presently exists for national forest timber. It will be important to remember this point when evaluating the effect of completion of the highway on national forest logging and lumbering activities.

The Forest Service is not restricted with respect to national forest recreational offerings. There is no constraint on recreational development similar to that of the sustained yield-allowable cut concept in timber management. As a result, federal provision of outdoor recreational facilities is limited only by the physical opportunities available in the unit, and the funds allocated for construction and maintenance of acceptable recreational facilities.

Increased demand for recreational facilities thus faces only financial and physical constraints. This means that increased demand caused by improved access can generate a significant response in national forest recreational offerings even in relatively underdeveloped areas such as the Swan-Clearwater Valley. In economic terms, the short-term supply curve for national forest recreational facilities has been highly elastic in the study area during the period 1950-1965. This fact also is important to remember when evaluating the effect of completion of Montana 209 on the study area.

2. State Constraints - The U. S. Enabling Act of February 22, 1889 provided that Sections 16 and 36 in every township be granted to the State of Montana and used to generate income for school support. The State Constitution places direct control of its lands with the State Board of Land Commissioners which is composed of the Governor, Superintendent of Public Instruction, Secretary of State, and the Attorney-General of Montana. In order to facilitate administration and management of these lands, the state legislature established the Office of the State Forester in 1909, and assigned responsibility for all matters relating to the state forests to that office. The State Forester thus operates within the framework of the State Board of Land Commissioners and it is his responsibility to manage the state forests in a manner which will "...secure, through forestry management, a continuous supply of timber and a permanence of watershed cover."[47] Thus, forest management on state lands is subject to many of the same constraints found on federal lands; both are subject to the concept of sustained yields

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[47] Seventeenth Report of the Office of the State Forester, Missoula, 1960, p. 12.

and regulated cutting practices. Therefore, as with federal lands, the short-term supply of stumpage from state lands is relatively inelastic regardless of improved or unimproved access.

Recreation development on state lands is also subject to constraints similar to those imposed on federal lands; facilities for outdoor recreation are limited only by the number of acceptable sites in the unit and the appropriations available for their development. Thus, the short-term supply of state-owned recreational facilities is relatively elastic with respect to increased access and demand.

3. Private Constraints - Large private ownerships account for 205,350 acres, or about 29 percent of the land area in the Valley. They are a significant factor in the total land management picture and for the most part are managed to produce an immediate profit to their respective owners. A large acreage in the unit has been certified as a Tree Farm by the American Forest Products Association. Although informed forest management requires regulation of timber cutting, a profit criterion may require liquidation cutting in undeveloped stands such as those found in the Swan-Clearwater Valley. Indeed, there is a continuing conflict among private land owners between the long-term interests of the timber stand and the short-term profit interests of forest owners.

In those areas of quite low timber value, profit is of relatively little concern, and investment in good forest management practices such as thinning, or the development of a road system, is difficult to justify. However, when access opens a new area, both profit and forest management opportunities develop for the forest owner. Which factor becomes dominant depends on the desires and administrative decisions of the property owner, the condition of the timber stand, and the market price of stumpage. High quality, over-mature timber stands usually command a premium market price, and not infrequently the desires of the owner as well as forest management criteria require liquidation of the timber stand. This means that offerings of private stumpage are usually responsive to increased access and increased stumpage prices. In terms comparable to those used for federal and state offerings, private stumpage sales are the most elastic of all with reference to improved access. Thus, one would expect to find substantial private cutting in an area such as the Swan-Clearwater Valley subsequent to initial access and development. As the data show, this is what has occurred within the unit during the period 1950-1965.

Recreation on private lands is subject to the same profit considerations as timber. Thus one would expect to find recreational developments on private lands wherever such facilities are expected to be profitable. Where nearby large blocks of public land make recreational facilities available without direct charge, the potential profit for recreational facilities on private land goes down. Thus, where inexpensive substitutes are readily available, the supply of private recreational facilities is relatively inelastic with respect to increased access. This is the case for many types of recreational facilities in the Swan-Clearwater Valley. Unique services such as guide and pack-string facilities, however, are not offered by public agencies. As a result, one finds these private recreational offerings quite elastic and subject only to the constraints of physical opportunities and consumer demand. This point also is important when considering the effect of completion of the highway on the Swan-Clearwater Valley.

Lumbering, or the conversion of logs into a variety of end products, is the final activity to be considered. It is exclusively a privately-owned commercial activity and, as such, is subject to a profit criterion. This means that improved access can have two types of effects on the lumbering industry in the unit: it can lead to increased profit by lowering hauling costs and/or it can increase stumpage prices and reduce profit for local industry by making possible increased competition from firms external to the area. The former would encourage expansion of lumbering activities in the area, while the latter may have the opposite effect if external firms are more efficient or more economically situated than local firms. In either case, the criterion for evaluating the effect of the highway is the same as for other activities in the area; it is the response or change in the industry during the study period.

Basic Assumptions

Not all change during the study period can be attributed to completion of the highway. Basic economic trends within the nation as a whole and the region of which the study area is a part also exert an influence on response. However, it may be argued that without improved access, external economic trends would not greatly affect the internal activities of an area such as this. Thus, the effect of access is to make it possible for better participation of an area in external economic trends, as well as increasing the demand for unique opportunities which may exist within the area.

In terms of this study, the effect of exogenous factors on the area will determine the magnitude and direction of response generated by completion of the highway, but the highway itself is neutral with respect to such change. The study also shows that short-term response in the logging of publicly-owned stumpage is constrained by sustained-yield timber management practices. In the private ownership areas, profit considerations temper these practices and may constrain policy and practice less than in the case of publicly-owned timber resources. Conversely, recreational offerings on public lands will be quite responsive to improved access and changed demand, while their private counterpart will again be constrained by profit considerations. Similarly, lumbering activity in the area is subject to the profit constraint and will be quite responsive to changes in the competitive status occasioned by completion of the highway.

With these factors clearly in mind, it is possible to document changes in logging, lumbering, and outdoor recreation during 1950-1965 and draw tentative conclusions concerning the effect of completion of the highway on the Swan-Clearwater Valley.

The Timber Resources

U.S. Forest Service inventory data indicate that in 1959-1960 approximately 5.194 billion board feet of standing sawtimber was located on non-reserved, commercial forest land within the Swan-Clearwater Valley (Table 4). Although the 1965 inventory figure was probably smaller, the 1959-1960 figure gives an indication of the magnitude of the sawtimber resource available in the Valley. Further, it establishes the ability of the area to respond to increased demand for stumpage through accelerated harvesting of standing timber.

Major species in the area are western larch and Douglas fir; both are of primary commercial importance. Species of little or no commercial value are whitebark and limber pine, alder and other hardwoods. However, these latter species account for only a minor volume and are not important in the total inventory.

Table 5

Total Sawtimber Inventory--All Ownerships--Swan-Clearwater Valley--1959-60

SPECIES	VOLUME MMBM
Western larch	2,185
Douglas fir	1,374
Englemann spruce	757
Ponderosa pine	415
Lodgepole pine	358
Alpine fir	41
Whitebark & limber pine	38
White pine	16
Alder & other hardwoods	10
TOTAL	5,194

SOURCE: Acreage pro-ration of 1959-60 inventory data for the Swan Working Circle, Flathead National Forest and the Missoula Working Circle, Lolo National Forest.

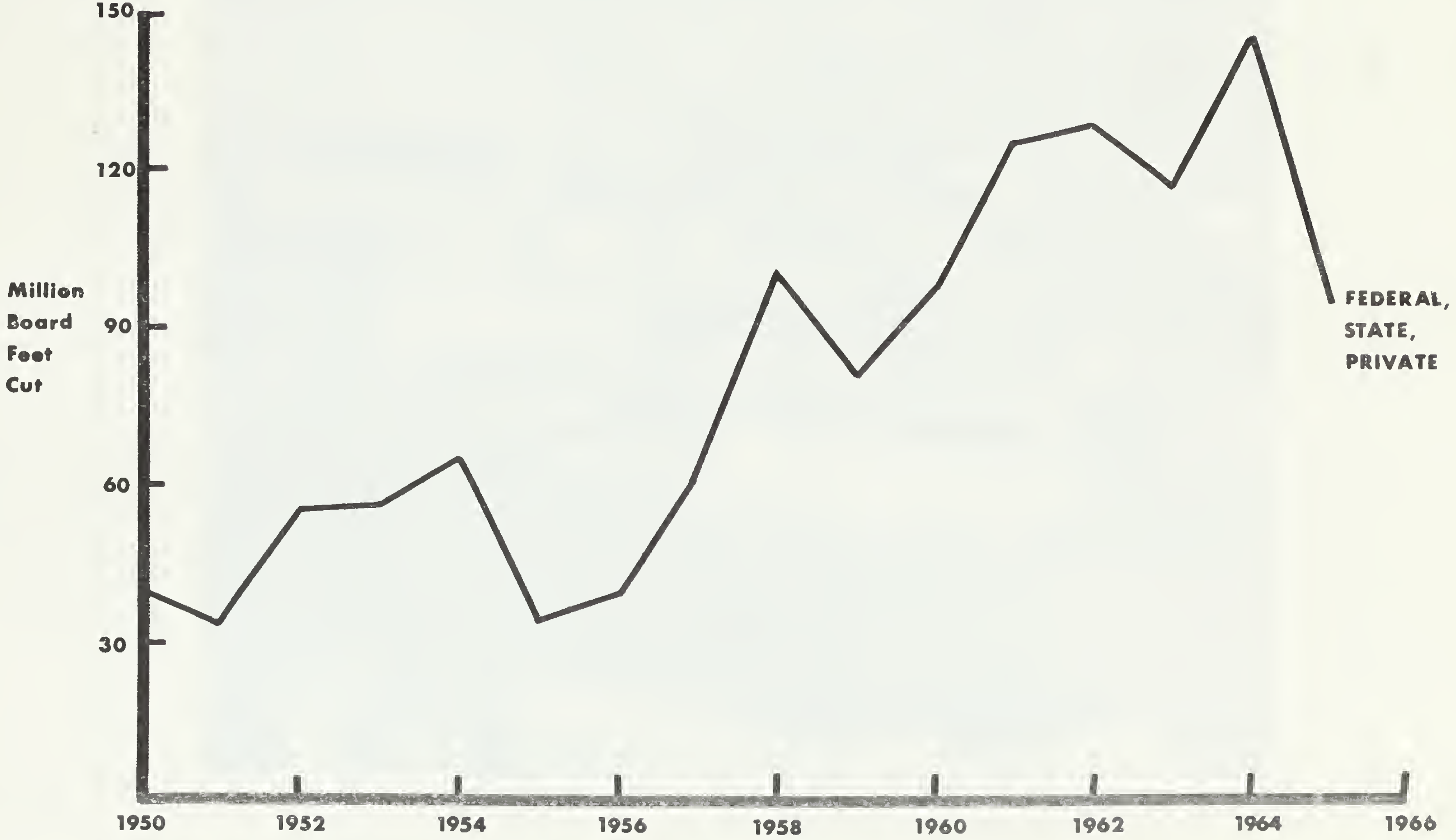
Distribution of the timber stand follows a pattern similar to the other major drainages in the Valley. Sixty-five percent of the total volume in the area is located north of the Swan-Clearwater summit in the Swan River drainage, and 35 percent is located south of the summit in the Clearwater River drainage.

Ownership data for the sawtimber resource are not available. However, pro-ration based on acreage ownership for nonreserved forest land indicates 3,688 billion board feet is publicly owned and 1,506 billion board feet is under private ownership. These figures are based on the 63.1 percent public and 29 percent private ownership pattern reported for commercial forest land in the study area.

Logging activity, as measured by the volume of stumpage sold each year, has more than doubled during the period 1950-1965 (Figure 19). We

Figure 19

Total Sales of Sawtimber Stumpage (Federal, State, Private)
Swan-Clearwater Valley, 1950-1965.



Truck loaded with Englemann spruce
logs in the Seeley Lake area of the Lolo National Forest.

U. S. Forest Service

calculate the increase to be 243 percent during the 15-year period. This represents an average annual increase of 16.2 percent (243 ÷ 15 = 16.2) and a compound growth rate of approximately 6.25 percent per year over the study period. In absolute terms, the annual sales volume ranged from a low of 33.824 million board feet in 1951 to a high of 144.139 million board feet in 1964 (Table 6). Thus the variation in rate of growth has been quite large on a year-to-year basis. Extreme changes in sales volume, however, occurred only during the years 1954 to 1959 (Figure 20). The calculated variation in sales volume during that period ranges from a decrease of 47 percent in 1954 to an increase of 60 percent in 1957-1958.

The reasons for changes of this magnitude are subject to question. It is known,however, that an epidemic of spruce bark beetles damaged millions of board feet of standing timber in western Montana during that period and made it mandatory to accelerate cutting of spruce in the more heavily infested stands. Historical lumber production figures for the state indicate the extent of the salvage effort required to harvest damaged trees. Spruce production increased from 39.9 million board feet in 1950 to 339.8 million board feet in 1956 at height of the salvage effort and has since receded to less than one-half that amount (Table 7).

The relationship between the volume index for spruce lumber sales and the volume of stumpage sold in the Swan-Clearwater Valley clearly shows that resources were diverted from normal timber sale activities to salvage activities during the mid-1950's (Figure 21). As the volume of spruce lumber production in Montana increased, the volume of stumpage sold in the study area declined. Conversely, a reduction in spruce lumber production

Table 6

Total Stumpage Sales, Percent of Stumpage Sales Change, and Volume Index for the Swan-Clearwater Valley, 1950-1965

YEAR	SALES VOLUME MILLION BOARD FEET	PERCENT CHANGE FROM PREVIOUS YEAR	INDEX
1950	39.088	---	100
1951	33.824	-14	087
1952	54.187	+60	139
1953	56.372	+ 4	144
1954	65.122	+16	167
1955	34.586	-47	088
1956	39.023	+13	100
1957	62.030	+59	159
1958	99.344	+60	254
1959	80.496	-19	206
1960	96.585	+20	247
1961	124.257	+29	318
1962	127.751	+ 3	327
1963	115.974	- 9	297
1964	144.139	+24	369
1965	94.843	-34	243
TOTAL	1,267.621		

SOURCE: Records of major landowners in study area.

Figure 20

Year-to-Year Change in Total Stumpage Sales Volumes
in the Swan-Clearwater Valley, 1950-1965

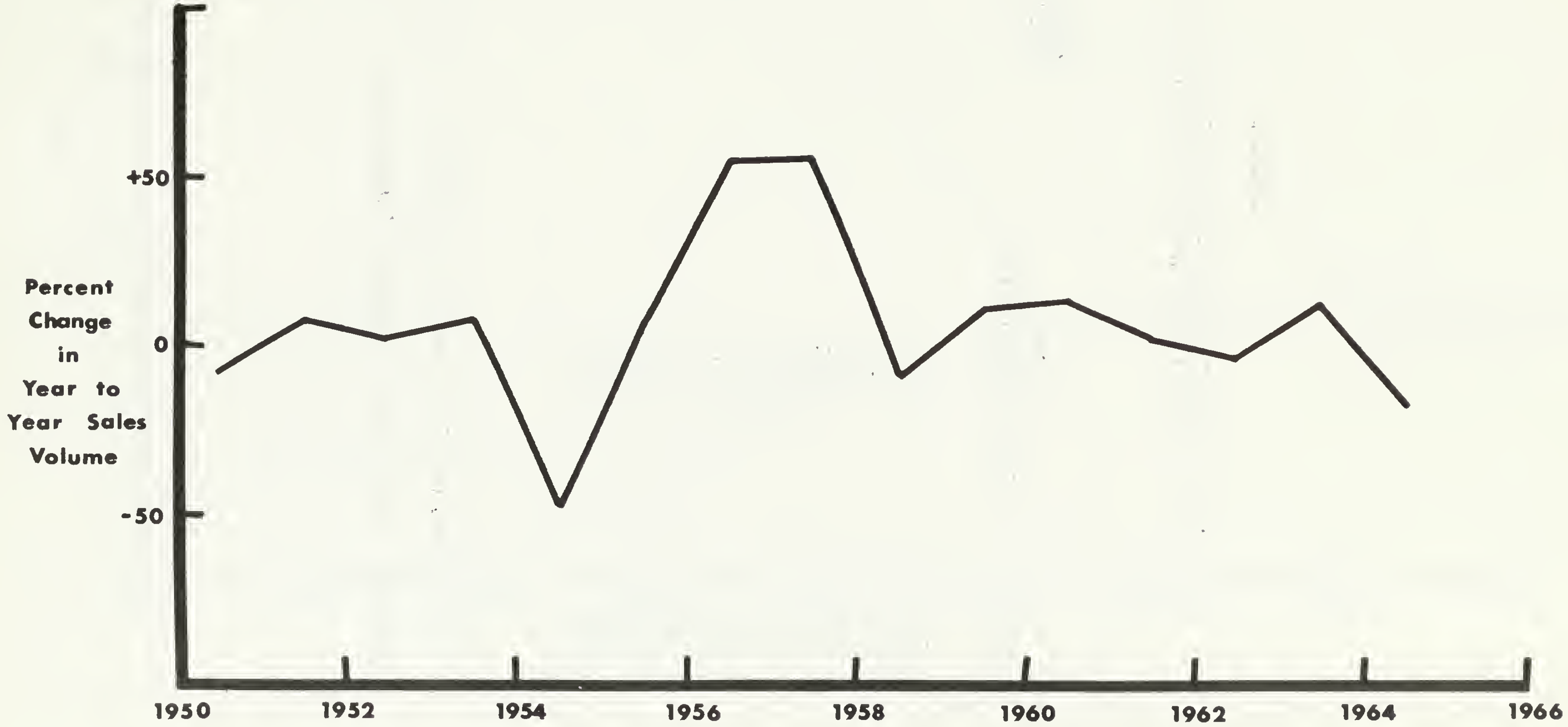


Table 7

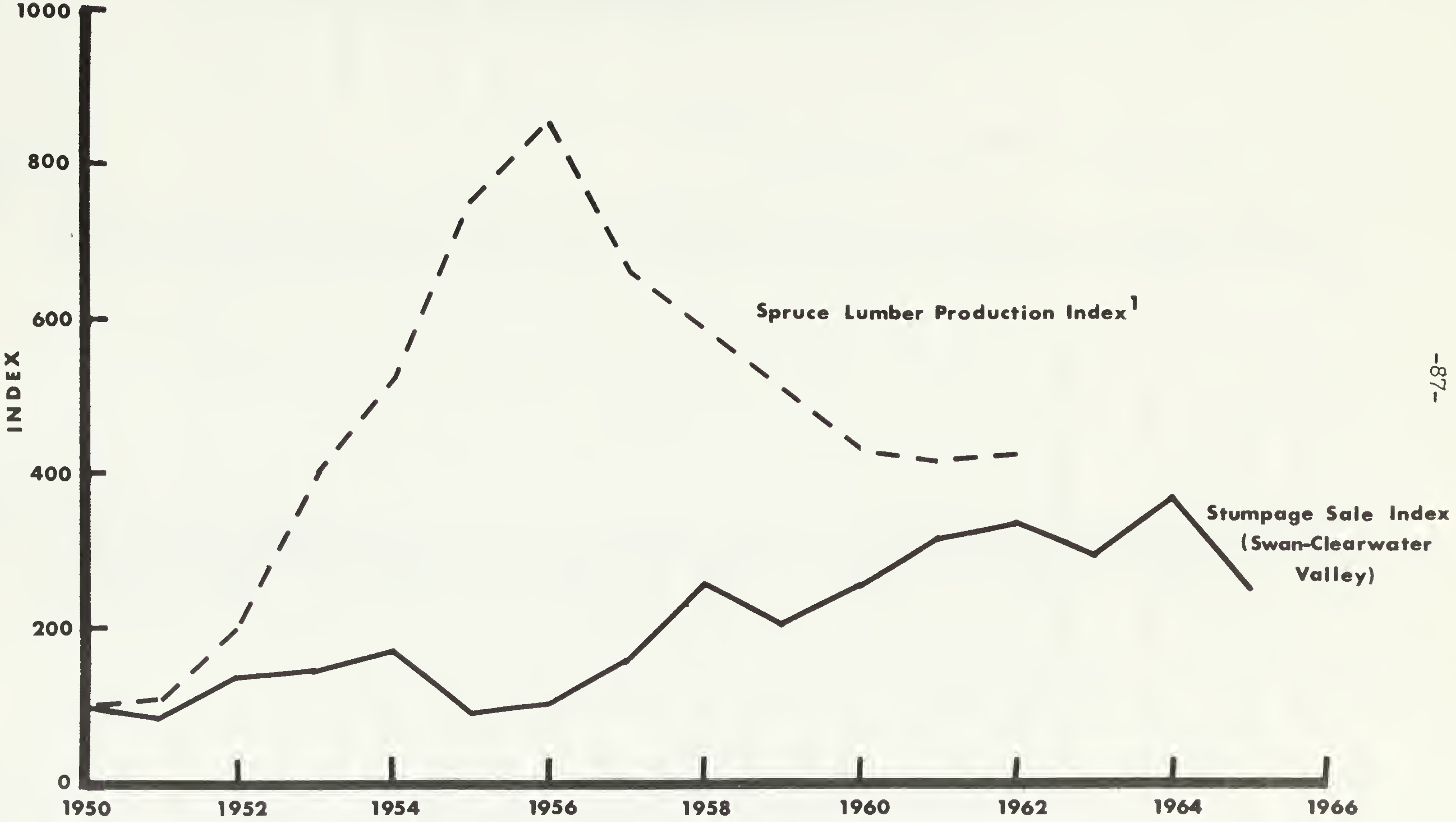
Spruce Lumber Production, Percent of Production Change and Volume Index for Montana, 1950-1962

YEAR	VOLUME MILLION BOARD FEET	PERCENT CHANGE FROM PREVIOUS YEAR	INDEX
1950	39.9	---	100
1951	41.3	+ 4	104
1952	77.6	+88	195
1953	154.3	+99	387
1954	206.7	+34	518
1955	300.2	+45	752
1956	339.8	+13	852
1957	263.9	-22	661
1958	236.5	-10	593
1959	201.8	-15	506
1960	168.8	-16	423
1961	166.1	- 2	416
1962	168.1	+ 1	421

NOTE: Last available data on spruce as a species is 1962.

SOURCE: Western Wood Products Association, Portland, Oregon

Index of Stumpage Sales in the Swan-Clearwater Valley and Spruce Lumber Production Index for Montana, 1950-1965



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[1] Last available data on spruce as a species is 1962

was correlated with an increase in stumpage sales in the area. The conclusion is, therefore, that sale preparation activities were diverted from regular to salvage operations during the insect epidemic. Once the beetle attack had run its course, stumpage sale activity in the unit resumed an upward trend which continued, with minor variation, through 1964.

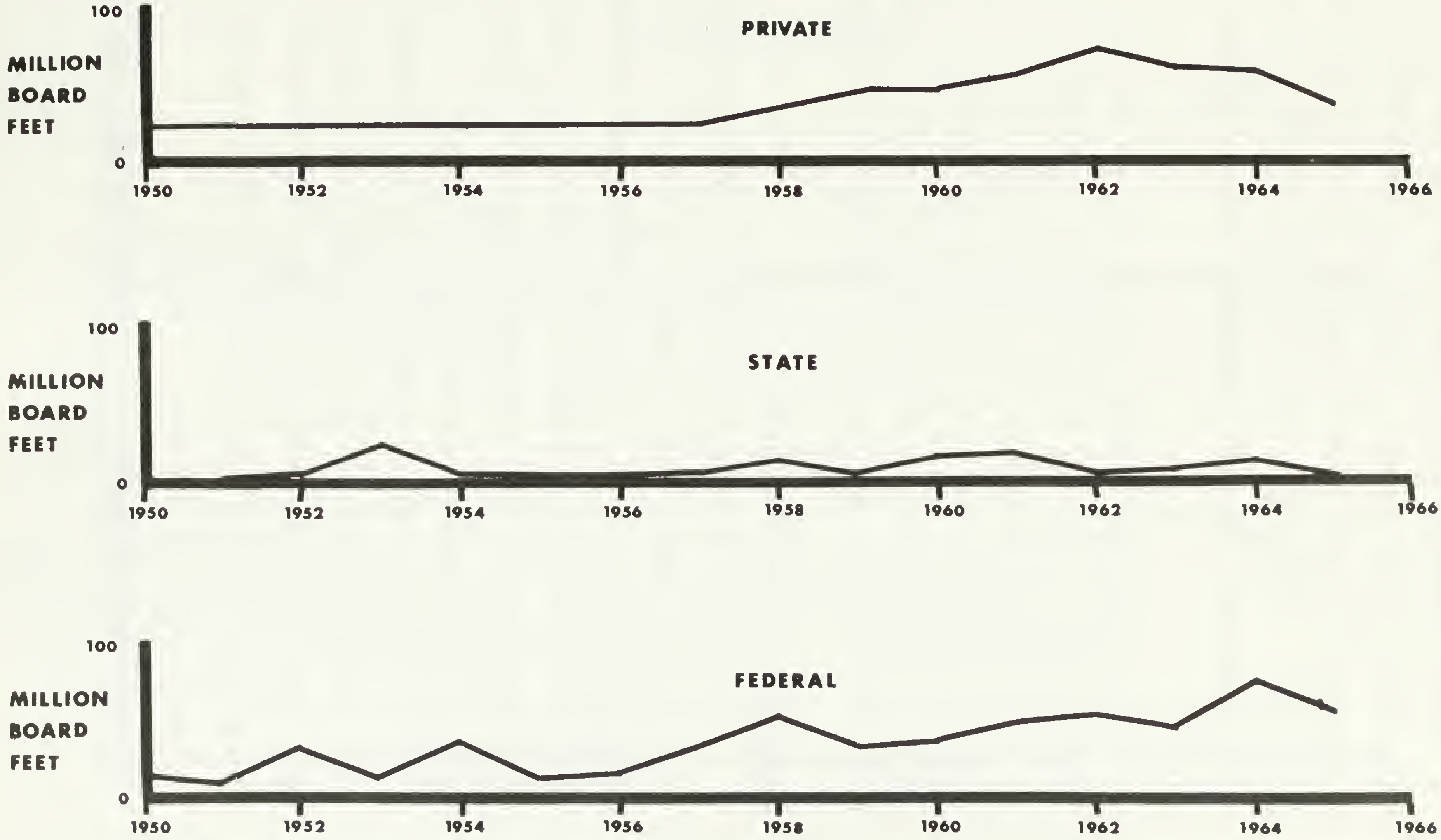
Timber Sale Activities by Ownership Classes

Federal stumpage sales in the Swan-Clearwater Valley have increased at a relatively uniform rate during the study period (Figure 22). Annual sales ranged from a low of 17.086 million board feet in 1950 to a high of 74.558 million board feet in 1964. Total sales of federal stumpage were 572.685 million board feet during the 15 year period. This represents approximately 45 percent of the 1,267.621 million board feet of stumpage sold in the study area between 1950 and 1965. Thus, the federal government, with 55.2 percent of the total land acreage in the Valley (Table 1), accounted for only 45 percent of the timber sold during the study period.

State stumpage sales remained relatively uniform throughout the study period (Figure 22). The first sale of state timber, for instance, was not made until 1952 and, with few exceptions, sales of relatively small size have been made each year. The total volume of material sold by the state during the 1950-1965 period was 106.540 million board feet. This is about 8 percent of the total. Thus, the state, with 7.9 percent of the land area, has contributed 8 percent of the stumpage sale volume. This implies that stumpage sales have been proportionally more intensive on state than on federal lands.

Figure 22

Log Sales by Ownership Classes, Swan-Clearwater Valley, 1950-1965



Private stumpage sales have shown the most growth during the study period and, in total, account for 588.396 million board feet. This is about 47 percent of the total volume of material sold in the area during the study period. Thus, private owners, with 29[47] percent of the land area, have contributed almost twice their proportional share of the total volume of sales.

Local and municipal stumpage sale data are not available. However, these ownerships account for only one percent of the total land area in the unit and their contribution to the total is not expected to be large. Most local and municipal sites are used for community facilities and do not contribute to the forest land ownership base for timber sale purposes. For this reason, they are excluded from the remainder of this report.

Stumpage Sales by Sale Location

The pattern of stumpage sales within the Valley has changed considerably during the study period. Both Clearwater and Swan River drainages enjoyed approximately equal annual stumpage sales during the early 1950's. The Clearwater River Valley, with 29 percent of the nonreserved, commercial land area, was supporting annual sales of approximately the same magnitude as the Swan Valley, which contained about 71 percent of the available acreage (Figure 23).

This pattern of sale activity had changed considerably by 1962. In that year, stumpage sales in the Swan Valley were 93.585 million board feet, while sales in the Clearwater Valley were 34.166 million board feet. By 1962, therefore, sales in the Swan Valley were about 2.7 times as great as in the

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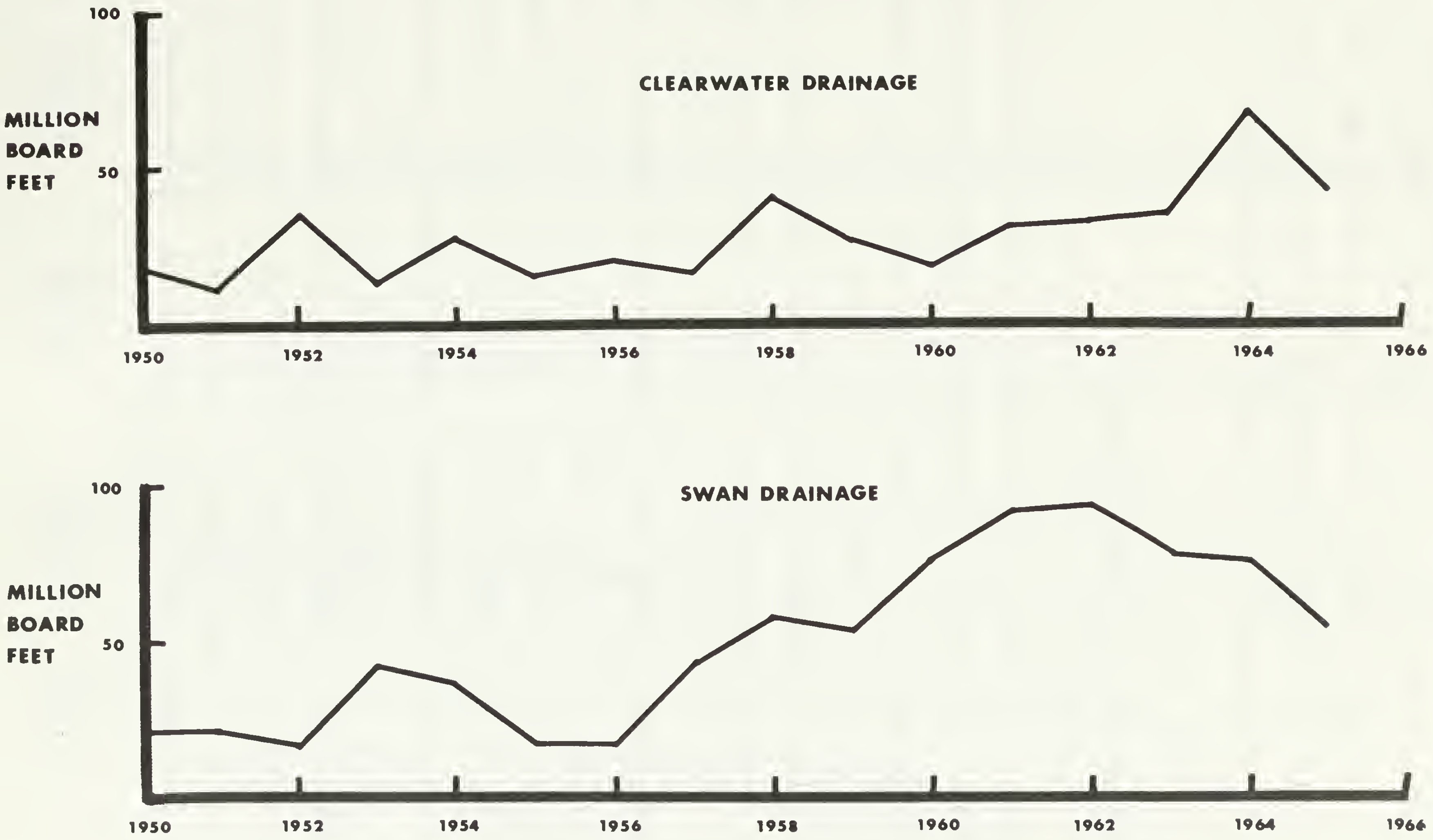
[47] This does not include that part of the 7.9 percent of land ownership classified as "other" which includes small private ownership.

Figure 23

Total Log Sales by Sale Location, Swan-Clearwater Valley, 1950-1965



Source: Records of major landowners in study area.

Clearwater Valley. This ratio is nearly proportional to the acreage distribution within the two areas (71 percent of the acreage divided by 29 percent equals a ratio of 2.4 to 1). Thus,it appears that timber sales activity had moved from a relative concentration in the Clearwater Valley early in the period to a more uniform distribution throughout the area late in the period.

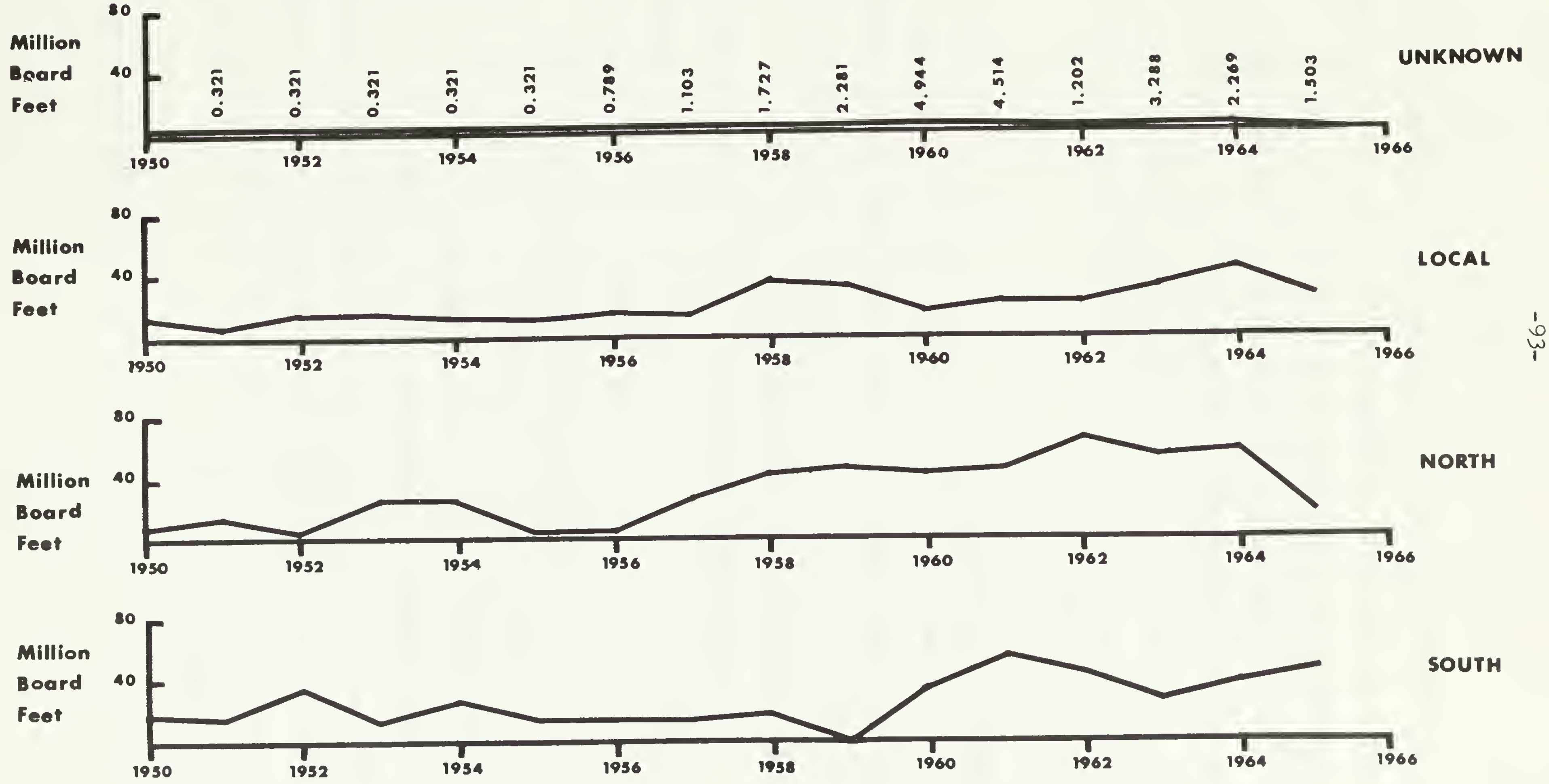
Stumpage Sales by Purchaser Location

Lumber mills located north of the study area purchased approximately 38 percent of the total volume of stumpage sold during the study period; those located in the south acquired 34 percent; those located within the Valley acquired 26 percent; and the remaining 2 percent was sold to individuals whose location could not be determined (Figure 23).

This average pattern, however, does not reflect the uneven increase in sawtimber sales to purchasers located in each of the three areas during the study period. For instance, purchases moving north from the Valley into the Kalispell, Polson, Columbia Falls area have increased at a more rapid rate since 1956 than sales going into the other areas (Figure 24). This trend is also correlated with the large increase in sales of stumpage in the Swan River Valley (Figure 23). Thus, it appears that a significant change in the pattern of stumpage sales began in 1956 and has continued since that date. Mills located in the Swan River Valley and purchasers located north of the study area have participated in the expanded volume of sales to a greater extent than others. Local purchasers,as well as those located south of the study area,have not participated in the expansion in sales volume

Figure 24

Log Sales by Purchaser Location, Swan-Clearwater Valley, 1950-1965



Source: Records of major landowners in study area.

to nearly the same extent as their northern counterparts. This fact is evident both in terms of stumpage sales by sale location (Figure 23) and stumpage sales by purchaser location (Figure 24). However, the effect of Montana 209 upon the change in the pattern of stumpage sales is difficult to ascertain. The increase in stumpage flow to the northern mills began before the completion of the northern section of the highway, and it may be that the anticipation of the easier access from the north into the area influenced this change.

Lumbering Activity in the Area

Sawmill activity in the Swan-Clearwater Valley has never been great. Only three major sawmills operated in the Valley during the period 1950-1966 and there has never been any other type of wood processing such as pulp, plywood, or particle board processing in the area.

The history of sawmilling is not encouraging. Of the three major mills operating in the area in 1950, only one was still operating at the close of 1965. All three mills did operate throughout the 1950's, however, and the two mills which terminated operations did so after 1962.

Specific reasons for termination of the two mills are not available. It is know, however, that one mill suffered a serious fire on July 1, 1965. An attempt was made to continue operations subsequent to the fire, but the effort was not successful and the mill terminated operations completely a few months later. The other mill which closed in the area terminated operations in 1962-1963 and all trances of the mill have been removed; the reasons for its closing are not evident.

Summary of Logging and Lumbering

The data indicate that Montana 209 has provided access and has allowed the Swan-Clearwater Valley to respond to both endogenous and exogenous demands for stumpage. The change has been dramatic. Annual sales of stumpage have more than doubled and the pattern of increase among ownerships has been as expected. Federal timber sales have increased, but only to the extent allowed by sustained-yield management constraints. State stumpage sales are bound by similar, but not as conclusive, constraints as federal sales. The result has been a proportionally greater increase in the role of state sales of stumpage during the study period.

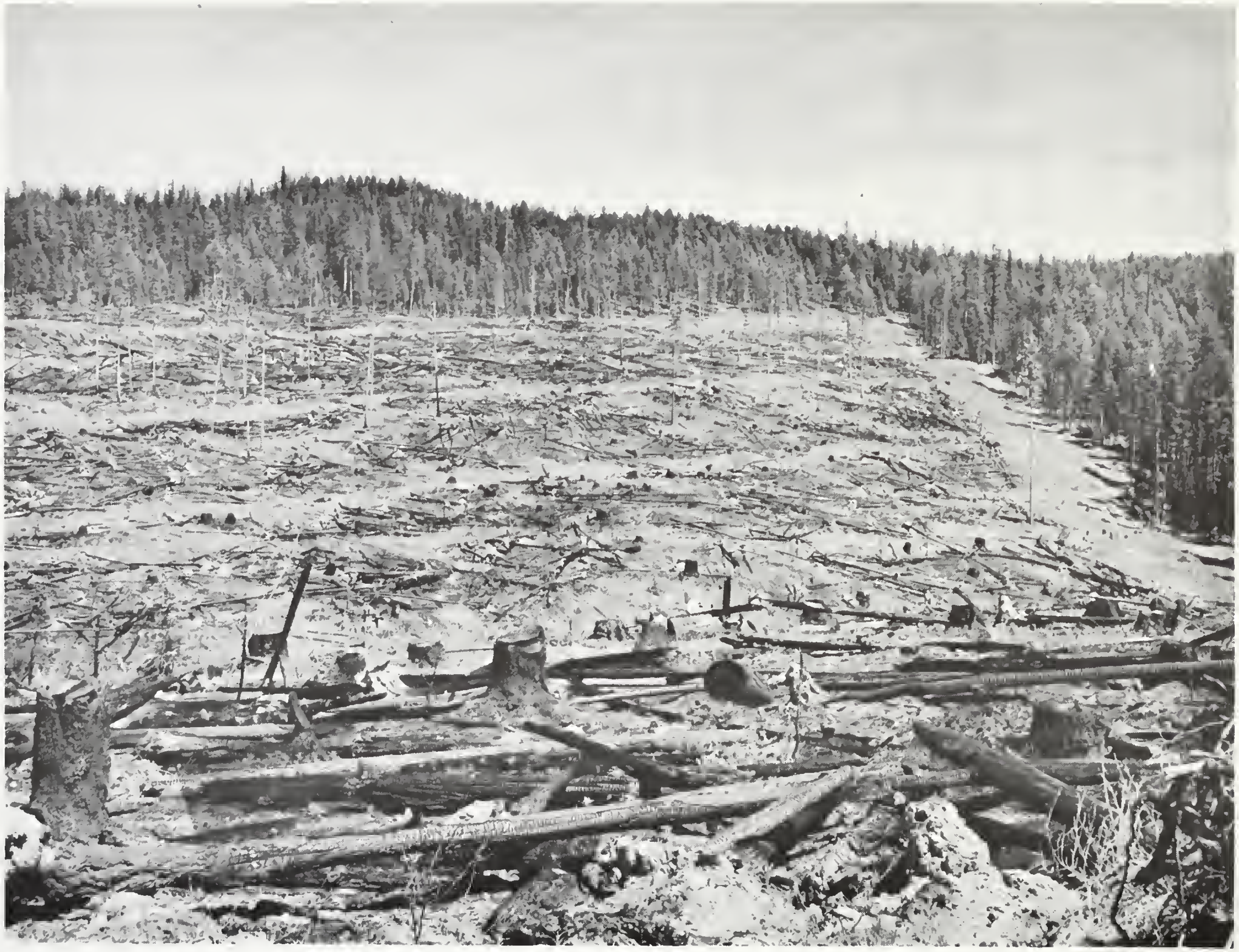
Private stumpage sales in the area, being subject to both profit and sustained-yield concepts, have shown a huge increase during the study period--an increase which is clearly greater than proportional to the size of private timber holdings. These relationships become evident when one compares acreage to stumpage sale figures for public and private ownerships (Table 8).

Table 8

Acreage and Stumpage Sale Comparisons for Public and Private Ownerships, 1950-1965

OWNERSHIP	ACREAGE PERCENT	STUMPAGE SALES PERCENT
Federal	68	45
State	6	8
Private	25	47
Local and Municipal	1	--
TOTAL	100	100

SOURCE: Records of landowners in study area.



A clearcut area in the Seeley Lake Ranger District
of the Lolo National Forest. This is the initial phase of reforestation.

U. S. Forest Service

The pattern of stumpage sales in the unit has changed geographically as well as in magnitude. A relative concentration of sales in the Clearwater River Valley early in the period has been replaced with a more uniform distribution of sales over the entire unit. Currently, the distribution of stumpage sales in the unit is about proportional to acreage. The Swan Valley with 71 percent of the nonreserved, commercial land area accounts for approximately 70-75 percent of the annual sales volume. The Clearwater River Valley, with 29 percent of the available land area now accounts for the remaining 25-30 percent of the annual stumpage sales volume of the unit.

One conclusion to be drawn is that the road has had a significant and continuing impact on stumpage-sale activities in the Swan-Clearwater Valley. The response, in terms of stumpage sales, has been greater than can be sustained over a long period of time. In some cases, primarily on public lands, sustained-yield management plans are being implemented and little change in annual stumpage sale volume should become apparent in the future. Private ownerships, however, are harvesting at a rate which cannot be sustained. Thus, a rather substantial variation in annual stumpage sale volume is anticipated on such lands in the future.

The final conclusion, therefore, is that the Swan-Clearwater Valley is still in a transition period with respect to timber cut regulation and improved timber management practices. This means that the full effect of the road has not been realized to date. More improved access will make intensive management economically feasible on more lands, and in addition, will make more intensive management feasible on currently managed lands. The result will be an increase in the vigor and value of the regulated timber stands in the area. Over the long run, this will probably affect a more lasting change on the unit than those described for the highway construction period 1950-1965. Access is an absolute necessity for intensive management and Montana 209 now provides such access for the Swan-Clearwater Valley.

Chapter V

Outdoor Recreation

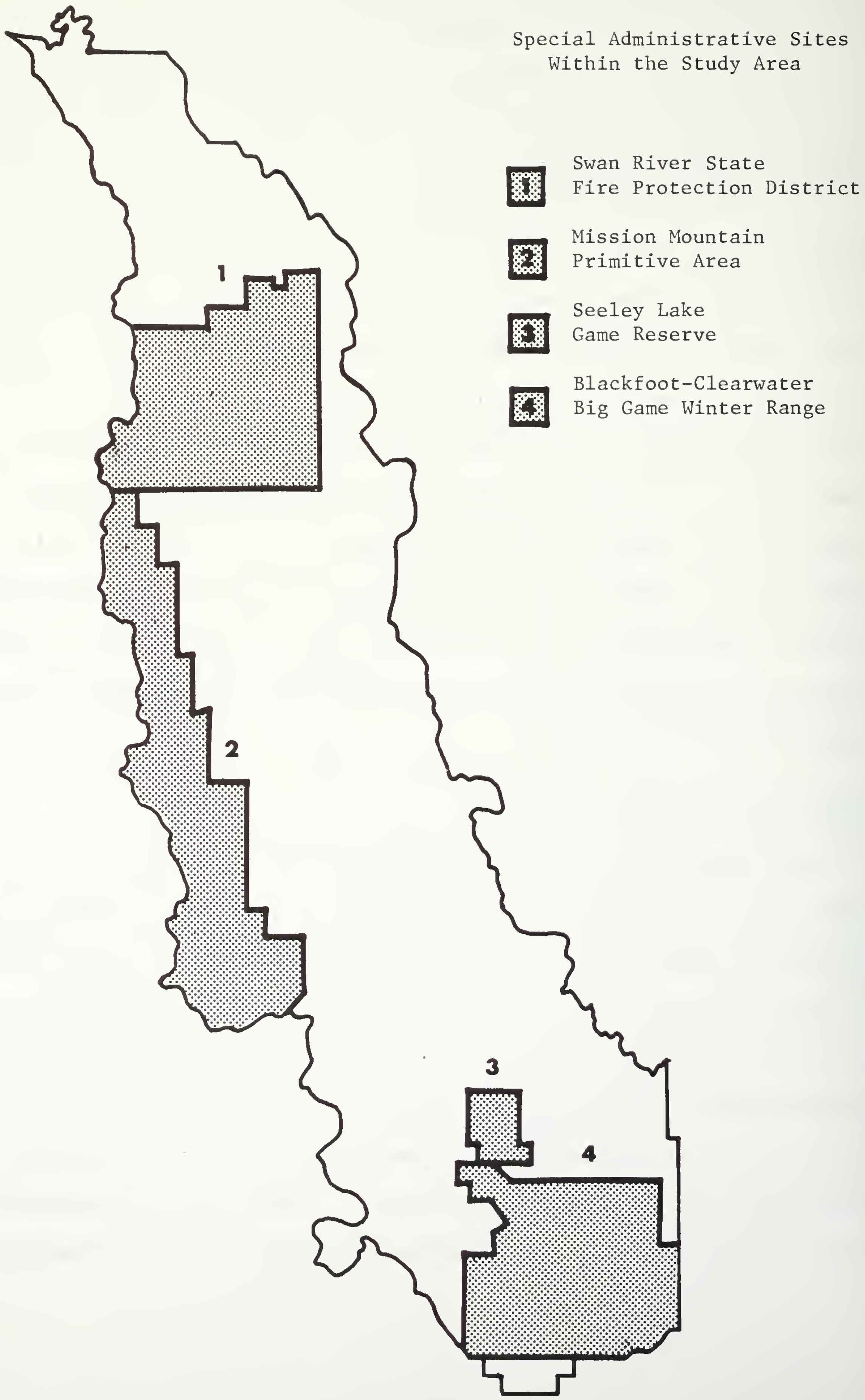
Outdoor Recreation Resources

The Swan-Clearwater Valley contains a wide range of physical resources desirable for diversified outdoor recreation. Areas suitable for high density recreation exist near streams and lakes, while opportunities for wilderness-type recreation are found in the more remote mountain regions of the Valley. In addition, the policies and land management objectives of both public and private agents within the unit vary as widely as the physical resources they administer. The result is a mosaic of outdoor recreation opportunities and activities which reflect a diversified response to a highly diversified and individualistic demand for outdoor recreation in the Swan-Clearwater Valley. Now that Highway 209 has made access more easy, it is only natural to assume that the recreational opportunities the Valley has to offer will be further developed and utilized.

History of Development

The Swan-Clearwater Valley has a long history of recreational development which dates from the early 1900's. Homesites, picnic areas, fishing, hunting, camping, and resort activities have existed in the study area for at least 50 years. For instance, the advantages of the area were officially recognized as early as 1921 with creation of the Swan Lake Campground. In 1939 the Mission Mountain Primitive Area was created (Figure 25). It was also about this time that the Seeley Lake Game Preserve was established to protect townspeople from the discharge of firearms. Only fishing and trapping are allowed within the Preserve--no hunting is allowed. Ten years later, the

Figure 25


1
2
3
4
1 Swan River State Fire Protection District
2 Mission Mountain Primitive Area
3 Seeley Lake Game Reserve
4 Blackfoot-Clearwater Big Game Winter Range

Special Administrative Sites Within the Study Area

Blackfoot-Clearwater Game Range was established to provide winter range for resident elk herds. Lastly, on February 26, 1954, a memorandum of understanding between the U. S. Forest Service, Office of the State Forester, and the Northern Pacific Railroad Company was signed preserving a strip of timber two hundred feet wide on either side of Montana 209. The strip was to henceforth serve as a scenic buffer and remain as nearly as possible in its natural state. Later, the width of the strip was made variable so that it extended back into the fringe of trees surrounding roadside meadows and other open areas. While these instances are only isolated cases, they indicate that the recreational advantages of the Swan-Clearwater Valley were recognized early in the history of the area and that action to preserve the aesthetic quality of the Valley has been forthcoming in the past.

The emphasis on recreational development has been fruitful and by the end of 1965, as the data will show, the Valley contained 29 campground and picnic sites, 27 summer home tracts, 15 major boating lakes and fishing access points, and 7 dude and guest ranches. In addition, 33 guides and outfitters were licensed by the Montana Fish and Game Department as qualified to operate commercial facilities in the study area by the end of 1965. Also, an undetermined number of roads-end facilities are maintained throughout the Valley for the use of individual or organized hikers and packers. While these latter facilities are important to the over-all development of the area, they are not critically related to completion of Montana 209. Also, the cost of accurately describing their pattern of development throughout the study period is prohibitive. For these reasons, they were omitted from further analysis.

While recreational development in the Swan-Clearwater Valley has been continuous, the rate of development has not been uniform over time. In fact, it appears that there occurred three main periods of recreation expansion since the early 1900's (Table 9). The initial period encompassed the 1920's, at which time both the Swan and Seeley Lake campgrounds were formed. There was also some interest in summer home development--notably on national forest and Anaconda Forest Products lands--at that time.

A lapse followed this initial period until the 1930's and 1940's, at which time recreation developments were keyed mainly to Work Projects Administration and Civilian Conservation Corps projects. It was the sites built during this period that formed the recreational base which was later expanded and added to during the period, 1958 to 1965

World War II and the Korean War slowed recreational development in the Valley until the late 1950's. Although resources were diverted during this period, user demand continued to expand, and since 1958 there has been a nationwide rebirth of interest in outdoor recreation. As an outgrowth of this renewed interest, the Outdoor Recreation Resources Review Commission was established. The Commission was directed by the President of the United States to determine (1) what the people would want in the way of outdoor recreation by the years 1976 and 2000, (2) what resources were or would be available to satisfy these wants, and (3) what policies and programs should be recommended for implementation on federal lands. The Commission's recommendations specifically had to do with the roll of the federal government in providing outdoor recreational facilities. The results of some 27 different reports and studies were assembled and published by the Commission in a compendium,

Table 9

Establishment Dates for Selected Major Recreational Facilities
Swan-Clearwater Valley, 1950-1966

YEAR	FACILITY
1920's	Legendary Lodge
1920's	Seeley Lake Summer Home Tract
1921	Seeley Lake Campground
1922	Placid Lake Summer Home Tract
1930's	Big Fork Public Beach
1936	Swan Crossing Campground
1936	Lindberg Lake Campground
1936-38	Goat Creek Campground
1936-38	Cedar Creek Campground
1936-38	Point Pleasant Campground
1936-38	Soup Creek Campground
1938 (est.)	Camp Paxon
1941	Creston Fish Hatchery
1948	Blackfoot-Clearwater Game Range
1958	Fishing Access--Big Fork State Park
1961	Salmon Lake Campground
1961	Placid Lake Campground
1961-65	Holland Lake Recreational Area
1962	Camp Utmost
1963	Big Larch Campground
1963 (est.)	Lake Inez Campground
1963 (est.)	Lake Alva Campground
1964-66	Alpine Shore Campground
1965	Summit Lake Overlook
1965	Rivers End Fishing Access Point
1966	Swan Valley KOA Kampground

SOURCE: U. S. Forest Service district records for federal developments and personal interview data for state, local, or private facilities.

Outdoor Recreation of America, in 1962. Included was the National Forest Recreation Survey which had been conducted during 1959-1960 on all Forest Service lands in the nation. This latter study made an initial inventory of existent and potential recreation resources available to federal agencies. The result stimulated both interest and development of recreational sites on federal lands.

It was also during this period that the complementary programs Operation Outdoors and Mission 66 were initiated on Forest Service and National Park lands respectively.[48] To coordinate these and other programs, the Bureau of Outdoor Recreation was created at the national level during 1962-1963 and many of the new facilities and services provided on federal lands within the Swan-Clearwater Valley during recent years were developed as a result of these national programs.

While national interests have accelerated recreational development on federal lands, local demand has encouraged response from other ownerships within the study area. For instance, 17 of the 29 campgrounds and picnic sites located in the Swan-Clearwater Valley in 1966 are under either state or large private ownership (Figure 26). Also, 15 of the 27 summer home tracts (Figure 27), seven of the 15 lake access points (Figure 28) and all 7 dude and guest ranches (Figure 29) are under other-than federal ownership. Thus, the recreational opportunities of the Swan-Clearwater Valley have been recognized and acted on by all classes of ownership.

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[48] These two programs were designed to accelerate recreational development on federal lands and attain stated goals by 1966.

Swimming and boat dock in front of Holland Lake resort
with the Mission Range in the background. This resort is
operated under a special use permit from the Flathead National Forest.

U.S. Forest Service

Data Analysis

The effect of completion of the Swan-Clearwater Highway on outdoor recreation in the unit can be demonstrated by dividing the historical development of major recreational facilities in the Valley into two periods: the first period being pre-1950, and the second period extending from 1950 to 1965. This division indicates that 19 of the 29 campgrounds and picnic sites in the Valley were either constructed or improved during the 1950-1965 period. Similarly, 6 of the 27 homesites tracts, 11 of the 15 lake access points, and all 7 dude and guest ranches have been constructed or improved during the study period (Table 10).

Most of this development has occurred since 1958 and has been concentrated in the campground and picnic site and lake access point type of facility. Traditionally and logically, these facilities are provided for recreationists who drive in, spend a day or so camping or boating, and then either return home or travel to other areas. Thus, recreational development in the Swan-Clearwater Valley during the study period has been concentrated among those activities most susceptible to improved access.

One apparent exception to this conclusion is the dude and guest ranch business. All seven of these firms were modified during the study period (Table 10). This type of recreational facility usually appeals to recreationists who spend more than a few days in one place. Thus expansion of dude and guest ranch facilities would not be assumed critically sensitive to improved access.

While this assumption may be valid for the purist, the changes implemented by the dude and guest ranches in the Swan-Clearwater Valley during the study

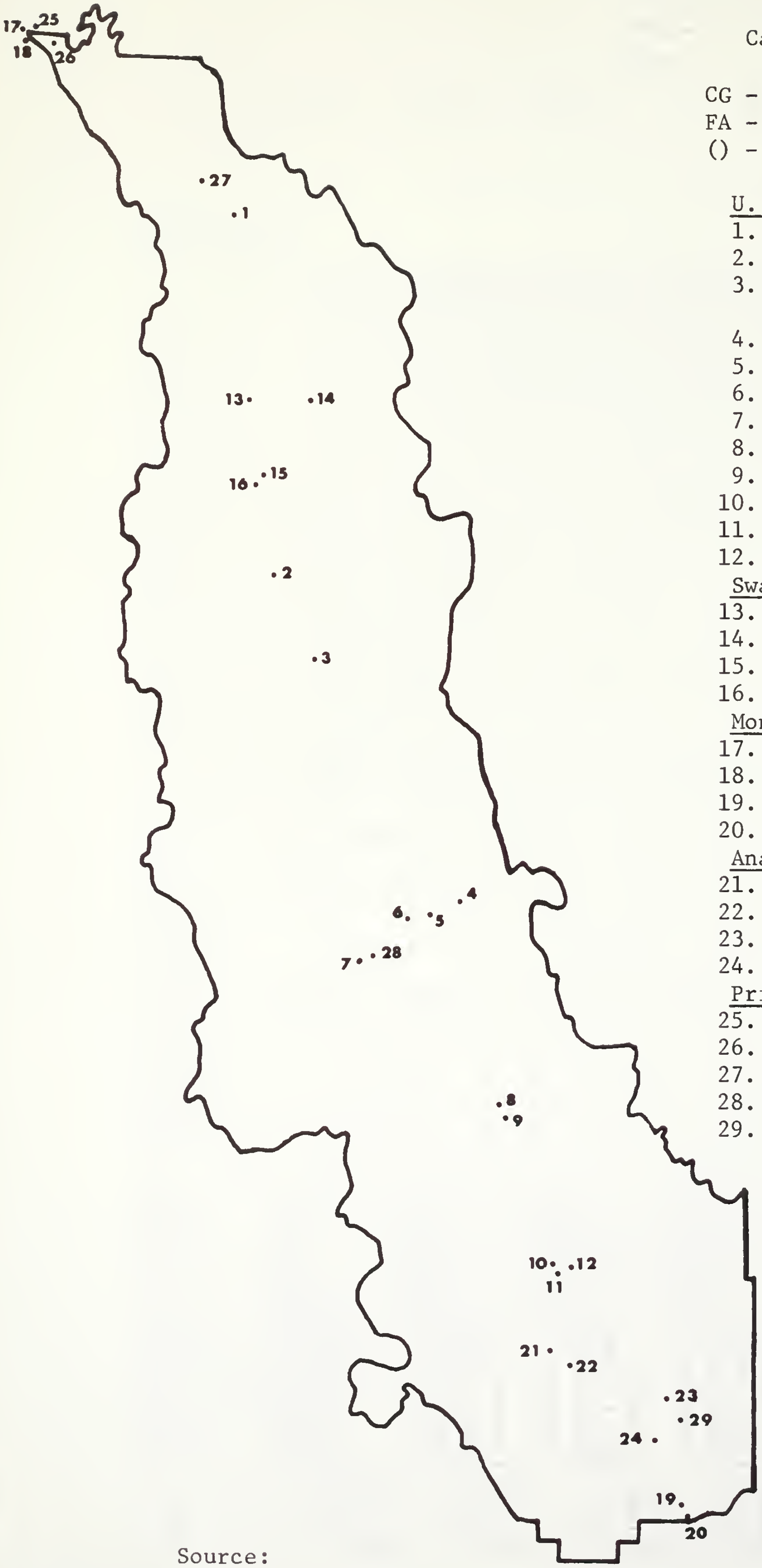
Table 10

Major Recreational Offerings of the Swan-Clearwater Valley, 1966

ITEM	CAMPGROUNDS AND PICNIC SITES	SUMMER HOME TRACTS	LAKE ACCESS POINTS	DUDE AND GUEST RANCHES	TOTAL ITEMS
U. S. Forest Service:					
a. Total number	12	12	8	--	32
b. Number constructed or improved, 1950-1965	6	3	4	--	13
State of Montana:					
a. Total number	8	8	2	--	18
b. Number constructed or improved, 1950-1965	5	--	2	--	7
Large Private:					
a. Total number	4	7	3	--	14
b. Number constructed or improved, 1950-1965	4	3	3	--	10
Miscellaneous:					
a. Total number	5	--	2	7*	14
b. Number constructed or improved, 1950-1965	4	--	2	7	13
Totals:					
a. Total number	29	27	15	7	78
b. Number constructed or improved, 1950-1965	19	6	11	7	43

*One ranch discontinued dude operations in 1966.

Figure 26



Campgrounds and Picnic Sites

Key

CG - Campground
FA - Fishing access point
() - Facility capacity in family units

U. S. Forest Service

1. Swan Lake CG (11)
2. Lion Creek CG (2)
3. Pony Cr. Picnic Site (0) (abandoned)
4. Holland Lake CG (41)
5. Holland Creek CG (2)
6. Swan Crossing CG (2)
7. Lindbergh Lake CG (3)
8. Lake Alva CG (2)
9. Lake Inez CG (2)
10. Seeley Lake CG (41)
11. Camp Paxon (organizational)
12. Big Larch CG (71)

Swan River State Forest

13. Point Pleasant CG (4)
14. Soup Creek CG (9)
15. Goat Creek CG (7)
16. Cedar Creek CG (3)

Montana Fish & Game Department

17. Rivers End FA (0) (undevel.)
18. Big Fork State Park (FA) (4)
19. Harper Lake FA (4)
20. Clearwater Crossing FA (8)

Anaconda Forest Products Co.

21. Placid Lake CG (N. shore) (4)
22. Placid Lake CG (E. shore) (3)
23. Salmon Lake CG (E. shore) (6)
24. Camp Utmost (organizational)

Private Indiv/Companies/Organizations

25. Big Fork Public Beach Picnic Site (8)
26. Pacific Park River Access (2)
27. Alpine Shore CG (8)
28. Swan Valley KOA Kampground (38)
29. Legendary Lodge (organizational)

285 maximum family unit
capacity at any one time

Source:
Field inventory,
summer, 1966.

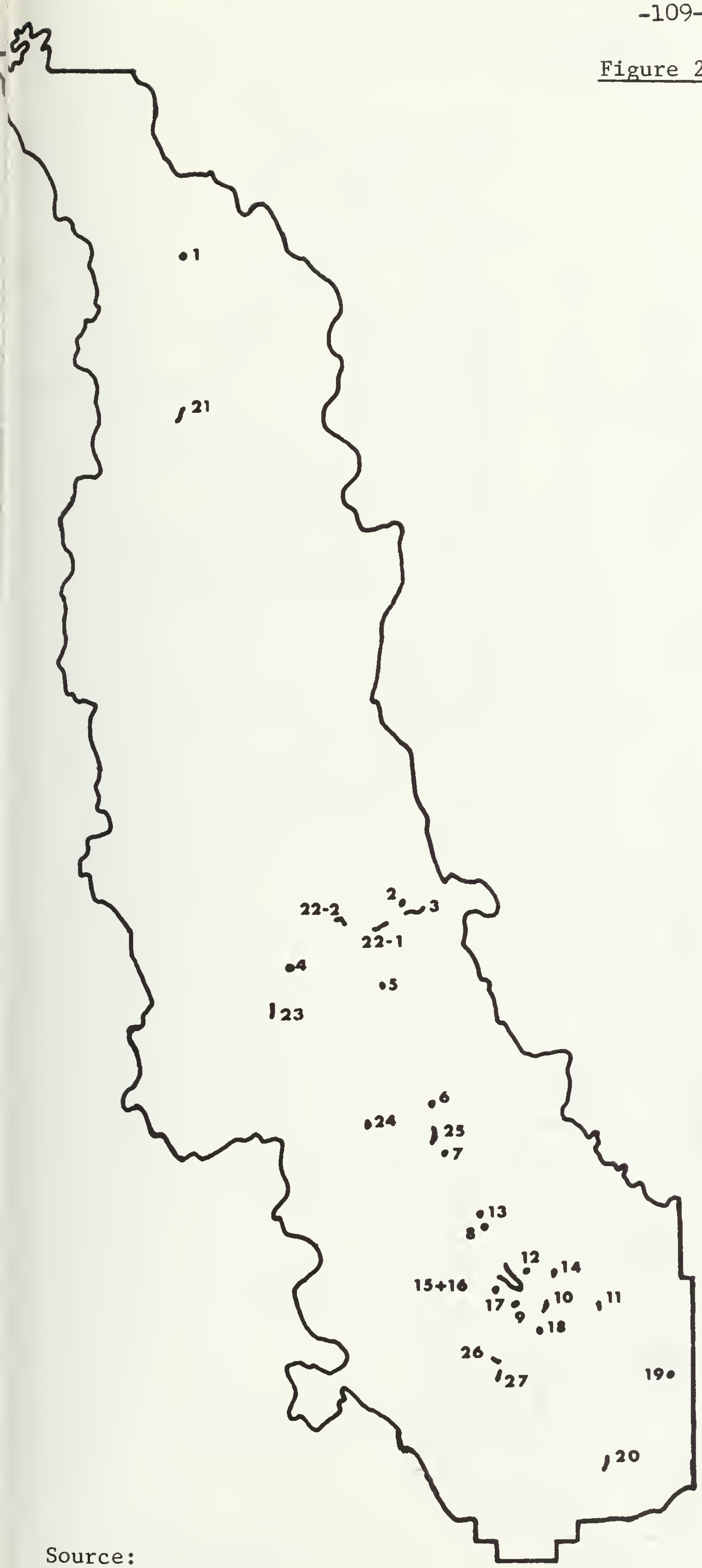


Figure 27

Special Use Permit
Summer Home tracts
Key
() Number lots per tract

Forest Service
1. Swan Lake (S. shore) (2)
2. Holland Lake Lodge (commercial)
3. Holland Lake (S. shore) (17)
4. Lindbergh Lake (1)
5. Pierce Lake (18)
6. Lake Alva (1)
7. Inez Lake (1)
8. Rice Creek (3)
9. Seeley Lake (39)
10. Leisure Lodge (commercial)
11. Tamaracks Resort (commercial)
12. Seeley Creek (4)

Office of State Forester
13. North of Seeley Lake (10)
14. Morrell Creek (9)
15. East shore Seeley Lake (32)
16. West shore Seeley Lake (24)
17. Seeley Lake Residential Area (35)
18. Morrell Flats (21)
19. Jct. Cottonwood & Woodworth Rd. (1)
20. Elbow Lake (39)

Northern Pacific Railway Co.
21. Point Pleasant (15)
22. Holland Creek
    "1" Tract (40)
    "2" Tract (11)
23. West shore Lindbergh Lake (9)
24. Marshall Lake (1)
25. West shore Lake Inez (38)

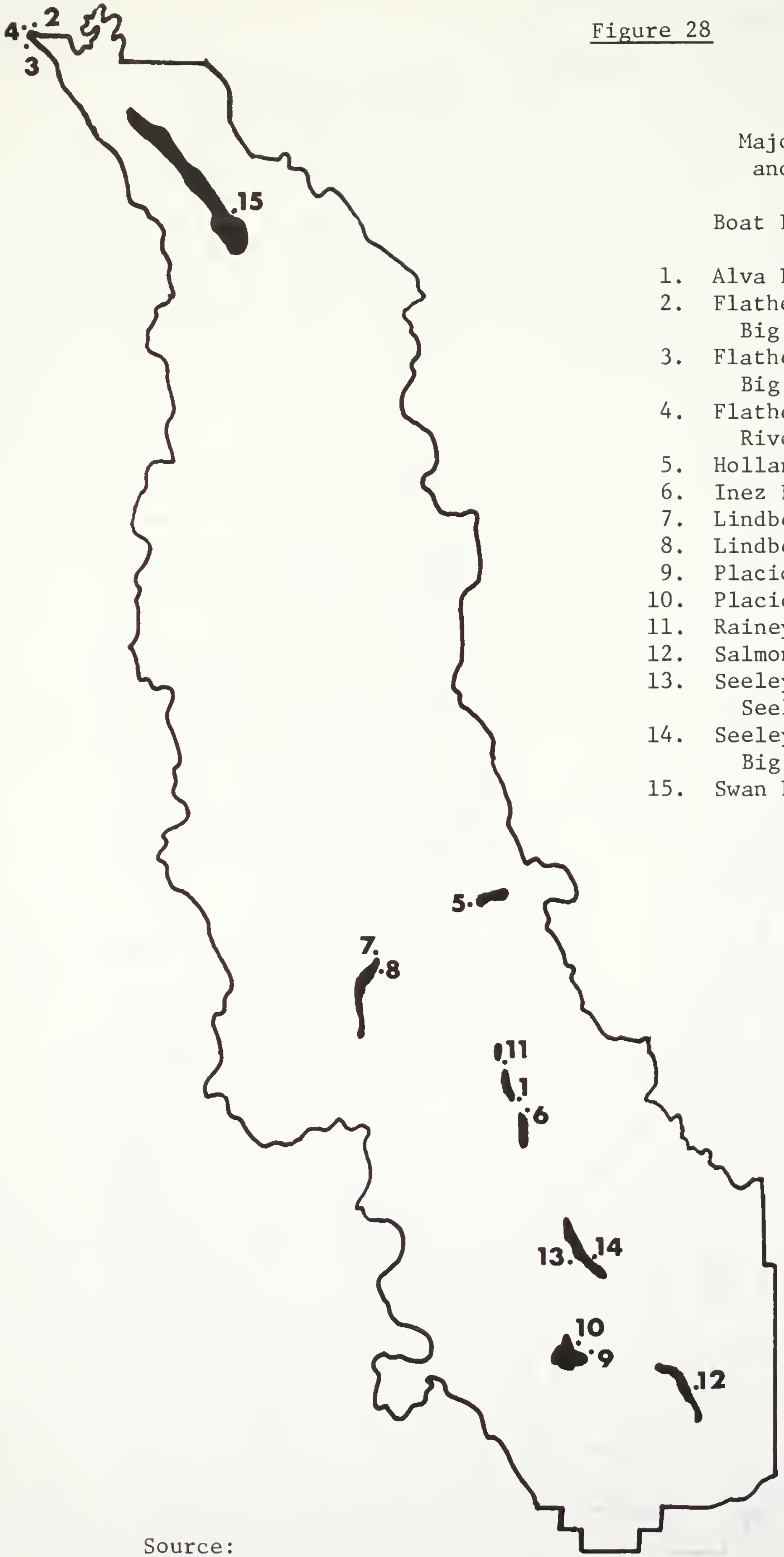
Anaconda Forest Products Co.
26. North shore Placid lake (8)
27. Vaugn Ranch @ Placid Lake (1)

# Proposed lots	39
# Occupied lots	239
# Unoccupied lots	102
Total # lots	380*

* Based on 1966 data

Source:
Field inventory,
summer, 1966

Figure 28



Major Boating Lakes
and Access Points

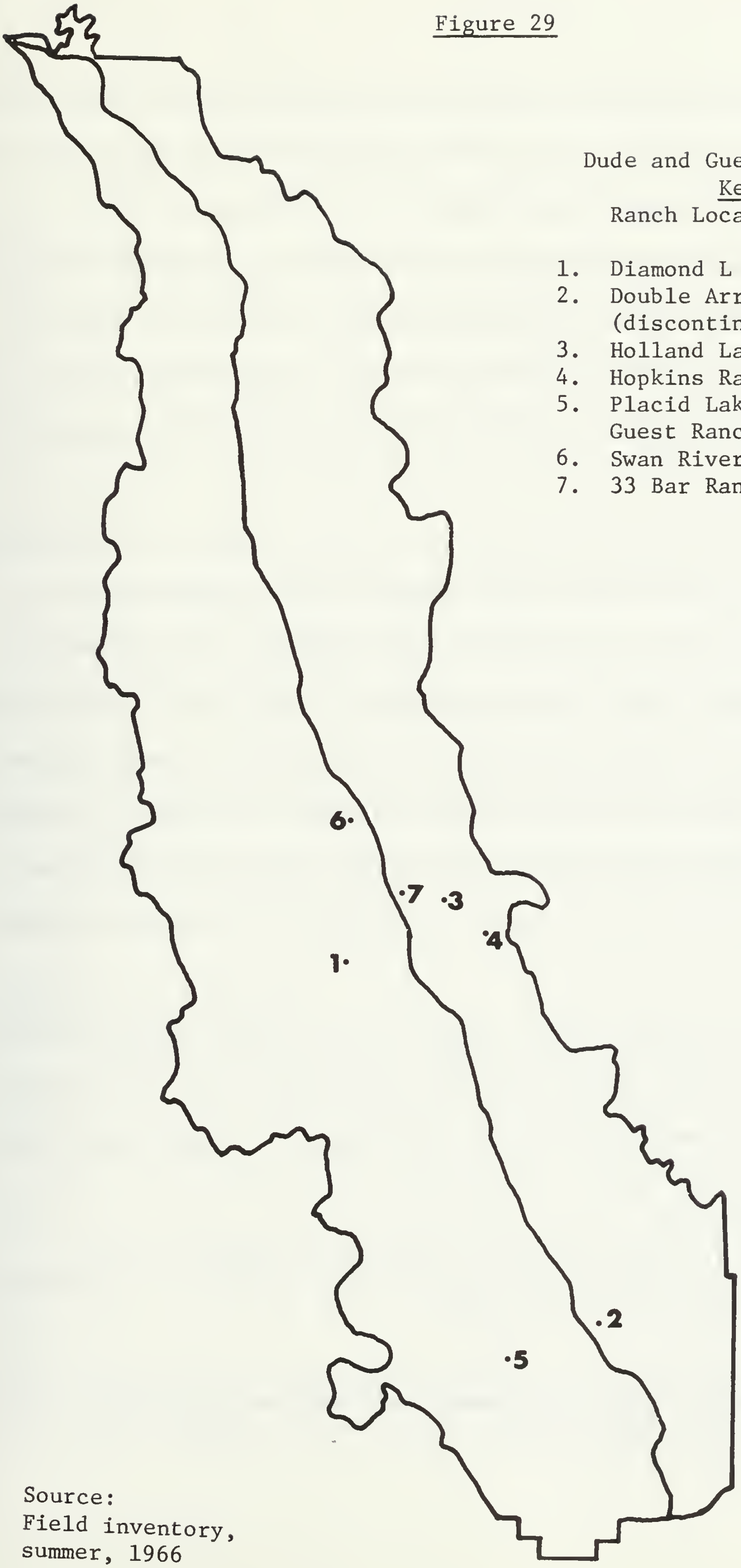
Key

Boat Launch Point

1. Alva Lake Campground
2. Flathead Lake
   Big Fork Public Beach
3. Flathead Lake
   Big Fork State Park (Fishing Access)
4. Flathead Lake
   Rivers End Fishing Access
5. Holland Lake Recreation Area
6. Inez Lake Campground
7. Lindbergh Lake Campground
8. Lindbergh Lake (Hickey Lodge)
9. Placid Lake (Owl Cr. Outlet)
10. Placid Lake (North Shore)
11. Rainey Lake
12. Salmon Lake (East Shore)
13. Seeley Lake
    Seeley Lake Campground
14. Seeley Lake
    Big Larch Campground
15. Swan Lake Campground

Source:
Field inventory,
summer, 1966

Figure 29



Dude and Guest Ranches

Key

Ranch Locations

1. Diamond L Bar Ranch
2. Double Arrow Ranch (discontinued)
3. Holland Lake Lodge
4. Hopkins Ranch
5. Placid Lake Hunting and Guest Ranch
6. Swan River Guest Ranch
7. 33 Bar Ranch

Source:
Field inventory,
summer, 1966

period relate to diversification of offerings rather than expansion of traditional guest ranch facilities. Horseback riding by the hour, overnight cabin rentals, and in two instances (Alpine Shore and the KOA Kampground)[49] commercial campground and picnic sites were installed by dude and guest ranches during the study period. These facilities appeal to tourists or others who are in the area for a short period of time. Thus, these modifications of the dude and guest ranch facilities may be assumed to be related to completion of Montana 209.

One particularly noteworthy aspect of the dude and guest ranch operations in the Valley is the high turnover rate experienced in the business during recent years. Four of the seven ranches in the Swan-Clearwater Valley have been sold or transferred under other-than-fee sale since 1964.[50] Whether this transaction rate results from increasing or decreasing profit opportunities is a moot point. What is illustrated is that a major re-allocation has been and is occurring, and it is possible that Montana 209 has contributed to this revaluation of the dude and guest ranch business in the Swan-Clearwater Valley.

Summer homesite development has shown the least change during the study period. One reason is that most tracts were established prior to 1950 and once surveyed and recorded, there can be little change. Also, summer homes are a relatively permanent form of recreational facility and one which would be less sensitive to improved access.

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[49] The KOA Kampground is franchised under Kampgrounds of America, Inc., a national system of privately-owned, high quality, limited use campgrounds. A fee is collected for use of the facility.

[50] Holland Lake Lodge, Placid Lake Hunting and Guest Ranch, Swan River Guest Ranch, and the Double Arrow Ranch transferred ownership during the study period while the 33 Bar Ranch, Hopkins Ranch, and the Diamond L Bar Ranch remained under single ownership.

Summer homes have not remained static, however, and some changes have occurred which can be traced directly to completion of Montana 209. Elimination of three summer homesites at Big Larch Campground and conversion of the area to a parking lot and public beach facility is a case in point. This change occurred in 1965, and in all probability would not have been necessary if user access to the lake had not been facilitated by completion of the highway.

Other summer homesite changes which occurred during the study period are the surveying, recording, and leasing of one new, privately-owned, summer home tract in 1962-63.[51] Also, private residential sites of a temporary nature were provided for the first time through granting of a trailer and campsite permit by the Anaconda Forest Products Company in 1966. Both of these developments reflect increased demand which can be traced directly to the improved access provided by Montana 209.

Summary and Conclusions

Completion of the Swan-Clearwater Highway has influenced all forms of outdoor recreation in the Valley. The major impact of the highway has been to change the composition of recreational offerings in the area. Before 1950, summer homes, dude and guest ranches, and a few campgrounds were the primary recreational attractions.

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[51] Holland Creek Summer Home Area, Northern Pacific Railroad Company.

While these types of recreational activities are still an important component of recreation in the area, Highway 209 has made short-term, high density, or mass recreation a reality in the Swan-Clearwater Valley.

Further evidence of the commercial aspects of recreational development is the fact that all agents, both public and private, have participated in the expansion of recreational facilities during 1950-1965. This indicates that recreational demand has not only increased in the area, but also that this increase has provided profitable opportunities for private investments as well as justification for expansion of public facilities. Twenty-three of 28 large private or miscellaneous and 20 of 40 federal or state facilities were constructed or modified during the period under study (Table 10). This pattern of development could be expected, as public agents are limited primarily by appropriations while private development is constrained by profit considerations. Thus, where profitable expansion of recreational demand is in evidence, development can be expected under all forms of ownership. This is what has occurred in the Swan-Clearwater Valley during the study period.

The full impact of the highway, with respect to the type of recreational facility required, the nature of the recreational experience desired by users, and the economic condition of the area, is difficult to assess. It is certain, however, that the complete impact of the highway has not been realized to date. The Swan-Clearwater Valley is still a relatively underdeveloped area. There are ample physical opportunities for new recreational developments, and as users increase in number, it is expected that the highway will play an ever-increasing role in the economy and the recreational development of the Swan-Clearwater Valley.

Chapter VI

Residential Characteristics of the Swan-Clearwater Valley

General Description

A good transportation system plays an important role in the settlement of any area and particularly one which is as isolated as the Swan-Clearwater Valley. One would therefore expect the completion of Montana 209 to have an impact upon the residential characteristics of the Valley. However, it must be kept in mind that it takes more than a good transportation system to encourage settlement; available land suitable for homes and a means of livelihood for the population are certainly two other major requirements, both of which are to some degree absent in the Swan-Clearwater Valley. The land ownership pattern, as has been noted, is such that it places restrictions on any great influx of residential building and the economic base is narrow and seasonal, since it is largely dependent upon recreation and forestry. As a consequence of these restraints, it was assumed that Montana 209 would, to date, not have had a great impact upon the growth of permanent residents in the Valley. However, as the area has long been highly regarded as a location for summer homes, it was felt that perhaps the highway would have made its greatest impact here.

In planning the research for the residential phase of the study, it was considered important not only to attempt to determine the residential growth trend in the Valley, but also to learn some of the characteristics of the people who populate the Valley. Where the population base is made up of two general types of residents--those who live in the area the year around and those who spend just the summer months there, it was felt a comparison

To gather the residential data, a list of the home owners in the Swan-Clearwater Valley was obtained from the records of the County Assessor's offices in the three counties contained within the Valley. These home owners were then mailed a questionnaire requesting the information desired. Approximately 800 home owners were contacted and responses were obtained from 344; this response was considered to be representative and adequate for a questionnaire mailing of this size. The results of the data obtained by this questionnaire response are presented in the next sections of the report.

Types and Locations of Residents

One of the aspects of the residential study was to determine what proportion of the home owners in the area were permanent residents and what proportion only used their Swan-Clearwater Valley homes on a part-time basis, and where these two types of home owners were located. The data revealed that 63.4 percent of the recorded home owners were nonpermanent residents and the remaining 36.6 percent were permanent residents. It was also found that the nonpermanent residents occupy their homes on an average of 4.0 months a year, and a number of these indicated that they only occupied their homes on weekends during the summer months. Thus, nearly two thirds of the homes in the study area are only in use a third of the year. The data not only indicate the dichotomy of the residential pattern of the Valley, but also provide evidence of the seasonal nature of the economy of the study area.

It is quite apparent that the Swan-Clearwater Valley has great appeal as a location for summer homes. The owners of the summer homes come from as far away as Florida and 4.1 percent of them are from California, the state contributing the largest number of out-of-state nonpermanent residents to the Valley. The majority of the area's nonpermanent residents naturally comes from within the state of Montana--87.6 percent. As Table 11 shows, the largest percentage of these are from Missoula County (54.6 percent of all summer homeowners) with Cascade, Lewis and Clark, and Flathead counties following in order. This heavy concentration of summer ownership in Missoula is another indication of the importance of the Swan-Clearwater Valley as a recreational area for the residents of Missoula County; and, as we have suggested previously, this ownership pattern has a marked effect on the traffic flow from this area of the state, particularly when it is considered that a number of these summer homes are utilized principally on the weekends.

It is interesting to note the distribution of the summer homes in the study area. The largest concentration of them is in the Seeley Lake area (58.3 percent), with the Condon area next with 22.5 percent, and the Swan Lake area with 17.0 percent. As Table 12 reveals, the percentage of summer homes diminishes from Seeley Lake north with very few of them at the northern extremity of the highway. One might expect then that the greatest summer home-resident traffic would be in the Seeley Lake area.

The distribution of all homes (summer homes and places of permanent residence) follows a pattern similar to the summer homes--over 50 percent of them are located in the Seeley Lake area. As Table 13 illustrates, the percentage of homes diminishes as one travels north along Montana 209. Thus, by excluding the residents in Big Fork, the concentration of population in the Valley is largely in the southern portion of the study area

Table 11

Percentage Distribution of Swan-Clearwater Valley Nonpermanent Residents by Place of Permanent Residence

LOCATION OF PERMANENT RESIDENCE		PERCENT OF NONPERMANENT RESIDENTS
Missoula County		54.6
Cascade County		9.6
Flathead County		6.0
Lewis and Clark County		4.1
Lake County		2.8
Silver Bow County		2.8
Other Montana Counties		7.7
Out of State		12.4
	TOTAL	100.0

Table 12

Percentage Districution of Summer Homes by Location in the Swan-Clearwater Valley

LOCATION		PERCENT OF SUMMER HOMES
Seeley Lake Area		58.3
Condon Area		22.5
Swan Lake Area		17.0
Upper Swan Lake and Ferndale Areas[1]		2.2
	TOTAL	100.0

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[1] This includes area bordering on the last two sections of Montana 209 completion. The 4.8 mile completion in 1962 extending from just above Six-mile Creek to Montana 326 and the 4.8 mile completion in 1964 from Montana 326 to Montana 35. Since Big Fork is not located within the area proper it was not included in the collection of these data.

with over 75 percent of it from the Condon area south. As the southern portion of Montana 209 was completed first, it may well have been a contributing factor to this population concentration in the southern part of the Valley, particularly in the Seeley Lake area. An attempt was made to verify this assumption by gathering data on the residential construction pattern for the study area.

Table 13

Percentage Distribution of All Homes by Location in the Swan-Clearwater Valley

LOCATION		PERCENT OF ALL HOMES
Seeley Lake Area		52.0
Condon Area		23.8
Swan Lake Area		16.0
Upper Swan Lake and Ferndale Areas		8.2
	TOTAL	100.0

Residential Construction

The residential construction pattern reveals that 43.8 percent of the Swan-Clearwater Valley homes now in existence were built prior to 1950 and 56.2 percent were built since that time, with over one-third (38.2 percent) of the homes in this area being built in the last decade. This, of course, is indicative of the recent residential growth of this portion of the study area.

Table 14 shows the construction pattern by general location along Montana 209.

Table 14

Percentage Distribution of Swan-Clearwater Valley Residences by Date of Construction

LOCATION OF RESIDENCES	CONSTRUCTION PERIODS BEFORE 1950	1950-1960	1960-1966	TOTAL
Seeley Lake	39.1	42.5	18.4	100.0
Condon Area	47.5	34.2	18.3	100.0
Swan Lake Area	47.2	18.2	34.6	100.0
Upper Swan Lake & Ferndale Area	67.8	25.0	7.2	100.0

As Table 14 indicates, Seeley Lake had its greatest growth in the period between 1950 and 1960,with 42.5 percent of the homes being constructed during this ten-year span. With the highway completion in the area in 1952,it certainly may be assumed that the new paved route contributed to the residential growth in the Seeley Lake area, although increasing levels of income and the trend toward second homes in the 1950's are also factors which must be considered. The Condon area also had a considerable residential growth in this period. Although the section of the highway leading into this area was not completed until 1959,there is reason to believe that the residential build-up in the Seeley Lake area may have influenced building north along the route of the highway, and those building in the Condon area were undoubtedly influenced by the coming highway completion. In the Swan Lake area, as the data show, there has been a large amount of residential growth since 1960,with 34.6 percent of the residences in the area having been constructed in the last six years. With the last two sections of highway completions occurring during this time, there is reason to believe that the anticipation of these completions and the actual completions of these sections of the route made this area attractive for residential construction. Highway 209, however, has not had much apparent effect upon the area bordering the last two sections of the highway. This is understandable when it is realized that the northern area, in the most part, was established very early along with Big Fork and is in great measure made up of cleared farm land. As a result, it isn't attractive as a location for summer homes. As the residential construction data revealed, the home building that has taken place since 1950 consisted largely of summer homes: 66.3 percent of all homes built in this period fall into the summer home category and 33.6 percent are classified as permanent dwellings.

While it is difficult to relate the exact impact of the construction of the highway upon the residential growth of the Swan-Clearwater Valley, it seems apparent from the trend of residential growth that it did have a favorable impact. It would also seem reasonable to believe that it would have had an even greater impact if the land ownership pattern were such that more land was available for home construction.

Residential Improvements

Another aspect of the research was to examine the pattern of residential improvement in the study area. Each home owner was asked if he had made any improvements to his property, to describe the improvements, and to name the year they took place. These data were then classified according to type of improvements. A total of 244 various types of home improvements was reported, almost all of these taking place since 1954. The types of improvements reported varied, as shown in Table 15, from plumbing, wiring, or insulating the house to a major addition of several rooms. As the table indicates, the largest percentage of improvements fell into the paint, siding, roofing and flooring category, which are probably general upkeep items and as such may not be significant as an indicator of anything more than an attempt to prevent the property from deteriorating. The most important fact these data seem to reveal is that over 40 percent of the improvements were additions to available living space. This is evidence of residential growth and optimism about the Valley as a place to live either on a part-time or full-time basis.

Table 15

Percentage Distribution of Swan-Clearwater Valley Home Improvements by Type of Improvement

TYPE OF IMPROVEMENT	PERCENTAGE OF REPORTED IMPROVEMENTS
Plumbing, wiring, insulating, heating	7.4
Paint, siding, roofing, flooring	24.2
New garage, carport, porch	15.6
Addition to home - more than one room	17.2
Addition to home - one room or less	1.2
Remodeling - more than one room	19.7
Remodeling - one room or less	2.0
Other	4.5
Well or water system	8.2
TOTAL	100.0

Swan-Clearwater Valley Homeowner Characteristics

1. Occupations - It was felt that an interesting aspect of the study would be to find out some of the characteristics of the people who make the Swan-Clearwater Valley their home, either permanently or on a part-time basis. These people are not only users of the highway, but also are a substantial part of the economic base of the Valley and, as such, they are quite important to the economy of the area. The first question asked on the personal data of the homeowner was in regard to his occupation, and this information was examined by each type of resident (permanent, non-permanent). Tables 16 and 17 present the findings of these data. Of the permanent residents, three occupation classifications are predominant (if retired can be regarded as an occupation), with craftsmen, operatives and kindred making up over a third (38.1 percent) of the permanent resident total. Nearly 20 percent of the heads of the household were retired (19.5 percent), and the second ranking productive job category for the permanent residents is that entitled managers, officials, and proprietors with 15.3 percent. Thus, there are actually two major areas of employment in the Swan-Clearwater Valley: that for skilled craftsmen (plumbers, carpenters, electricians, etc.) and operators (truck drivers, cat skinners, etc.) and in the area of management, proprietorship and officialdom. Obviously, these two job classifications are foremost, because the economy of the Valley depends so greatly on the lumber production and forestry management (both private and government) and the small trade and service establishments which serve the communities and the tourist trade. Also, though the winters are very cold, it can be thought of as a natural retirement area, although there are no data to compare this percentage

Table 16

Percentage Distribution of Permanent Swan-Clearwater Valley Residents by Occupation Classification

OCCUPATION CLASSIFICATION	PERCENT OF PERMANENT RESIDENTS
Retired	19.5
Professional-technical and kindred	5.1
Agricultural-farmers, farm laborers, etc.	7.6
Managers, officials and proprietors	15.3
Clerical, sales and kindred	1.7
Craftsmen, operatives and kindred	38.1
Service workers	5.9
Labor, excluding farm	6.8
TOTAL	100.0

Table 17

Percentage Distribution of Nonpermanent Swan-Clearwater Valley Residents by Occupation Classification

OCCUPATION CLASSIFICATION		PERCENT OF NONPERMANENT RESIDENTS
Retired		17.3
Professional-technical and kindred		25.0
Agricultural-farmer, farm laborer, etc.		3.8
Managers, officials, proprietors		27.9
Clerical, sales and kindred		7.2
Craftsmen, operatives and kindred		14.9
Service workers		2.9
Labor, excluding farm		1.0
	TOTAL	100.0

(19.5 percent) with which to determine whether or not this is an abnormally high percentage of retired people in the area.

In comparing the job classifications of the nonpermanent residents with those who reside in the Valley on a permanent basis, there is a considerable difference in these occupational areas. In the professional and technical classification the heads of the nonpermanent households make up one fourth of the total, whereas only 5.1 percent of the permanent residents' household heads fell into this category. Managers, officials and proprietors, too, form a greater percentage of the nonresidents over the permanent residents (27.9 percent vs. 15.3 percent), and there is a far smaller percentage of craftsmen and operatives among the nonpermanent population (14.9 percent vs. 38.1 percent) than there is among the permanent residents. The data actually support what one would expect regarding the occupational characteristics of the Valley: the permanent residents are largely skilled or semiskilled blue collar workers with a substantial percentage of the working force made up of small businessmen; the nonpermanent population is composed mainly of white collar workers in the higher income ranges.

2. Size of Family - The questionnaire also asked each homeowner about the size of the family who occupied the Swan-Clearwater Valley home. The permanent residents reported an average of 3.5 persons in the immediate family and the nonpermanent residents reported 4.2 persons. The slightly larger size of the nonpermanent resident family may be accounted for by the co-operation of families (brother-brother, father-son, etc.) in purchasing and maintaining the summer home. This family statistic in itself may not appear greatly important, but it does provide a measure of the population base.

It is interesting to note that when the average number of persons in the nonpermanent resident family is multiplied by the number of summer homes in the area, the total is substantial (4.2 persons X 507[52] households = 2,129 persons)--an indication of the impact the summer homeowner has upon the local economy.

3. Age - The average age of the permanent resident household head was found to be 51 years, while the head of the nonpermanent household had an average age of 54. It was initially thought that, because the area appeals as a retirement area, the average age of the permanent resident household head would be greater than that of the summer homeowner. This, however, did not prove to be true, and an explanation for this difference was not apparent from the data.

4. Income - The final questions asked of the Swan-Clearwater Valley homeowner was in regard to his income. Tables 18 and 19 present the results of these data. As a comparison of the two tables illustrates, the permanent resident of the study area has, on an average, a considerably lower income than that of the nonpermanent resident. Over 88 percent of the permanent residents have incomes of less than $10,000 a year. However, the Valley cannot be considered impoverished, because 67.4 percent make over $5,000 a year. Nonpermanent residents are considerably more affluent, with 42.8 percent of these household heads making over $10,000 per year and 87.6 percent having incomes of over $5,000.

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[52] 63.4 percent of 800.

Table 18

Percentage Distribution of Permanent Swan-Clearwater Valley Residents by Income

INCOME		PERCENT
Under $2,500		12.8
$2,500-$5,000		19.8
$5,000-$7,500		33.7
$7,500-$10,000		22.1
$10,000-$15,000		5.8
$15,000-$25,000		2.3
Over $25,000		3.5
	TOTAL	100.0

Table 19

Percentage Distribution of Nonpermanent Swan-Clearwater Valley Residents by Income

INCOME	PERCENT
Under $2,500	3.1
$2,500-$5,000	9.3
$5,000-$7,500	20.5
$7,500-$10,000	24.2
$10,000-$15,000	18.0
$15,000-$25,000	16.1
Over $25,000	8.7
TOTAL	99.9*

*Totals 99.9 due to rounding.

Summary

It is apparent from an analysis of the residential data that the population base of the Swan-Clearwater Valley is quite sparse and a large part of it is seasonal in nature. This illustrates the narrow economic base of the Valley and supports the assumption that economic development in the area has been constrained. The residential growth in recent years has followed a pattern which largely coincides with the construction sequence of Montana 209, and this supports the assumption that the highway has had a favorable impact upon home construction, particularly summer homes. These summer homeowners are affluent and come from afar, and as the recreational attractions become more diverse (such as the addition of proposed skiing facilities near Swan Lake) and more land opens up, there is reason to believe that the future build-up of part-time and full-time residents in the study area will be even greater than in the past. By providing improved access to the area, Montana 209 will help make all of this possible.

Chapter VII

Effects of Highway on Trade and Service Industries

The Prospect for Industry and Commerce

Highway improvements often promote industrial and commercial development in new or vacant areas. However, there is little to indicate that the Swan-Clearwater Valley will feel such effects to any great extent as the result of the completion of Montana 209. In fact, two of the three sawmills--about the only fixed facilities in the Valley that could be called industrial--closed down during or after the period of the highway construction. To some extent the highway may have lessened the chances for industrialism of this kind because it provided easy access to the outside industrial centers of western Montana. As was pointed out previously, logging, a basic industry of the Valley, has increased quite dramatically during the period of the highway's construction, but the processing of these logs is primarily carried out in milling centers outside of the Valley, and at present there is no indication that this pattern of activity will change.

Commerce and trade in the Valley is also hindered to some extent by the easy access to outside commercial and trading centers, but the small population in the Valley is undoubtedly the greatest restraint to this type of development. Commercial and trading centers require markets, and the market here (except in the summer months) is quite limited. As a result, it doesn't seem reasonable to expect any large scale of business development in the Swan-Clearwater Valley until there is an adequate permanent population base to support it. As might be expected, the business community in the Valley is largely highway oriented and depends to a great extent on the trade that the highway draws to it, particularly in the summertime. The study, then, deals primarily with businesses which are highway oriented and which are to a large extent dependent upon the summer traffic which Montana 209 provides.

In the preceding residential portion of the study, Big Fork was omitted because it was felt that the highway, by just terminating at Big Fork, would have had little if any direct impact upon the community's residential development. However, in this part of the study on the effects of the highway on the trade and service industries of the Valley, Big Fork is included. Here it was felt that the completion of Montana 209 would, by opening up the northern end of the Valley, have a direct impact upon the Big Fork business community.

Inventory of Trade and Services

The starting point of this part of the study was to conduct an inventory of the trade and service facilities within the Swan-Clearwater Valley. This was accomplished by personally calling on each firm and recording the desired information on prepared questionnaire forms (see Appendix Exhibit B for questionnaire form). The name and location of each business was recorded, as well as the legal owner's name and address. A description of the facilities and services the business offered was listed according to their importance; for example, when a business consisted of a cafe, a bar, and gas pumps, the proprietor was asked to rank each of these parts of the business according to the contribution they made to the total business volume. The businessman was also asked to name the number of months he kept the business open, how many employees he employed, the year his business was established, the additions he had made to the business over the years, and how much his business had increased or decreased between the years 1960 to 1965 and how much it had increased in 1966 over 1965. He was asked upon what type of clientele his business was dependent--tourists, summer homeowners, or permanent residents----and his general comments concerning the highway and the effect he felt it had had upon his business were invited. This interviewing procedure not only provided the information we felt was needed to determine the general growth of business in the area, but also gave the interviewer an insight into the problems of these businessmen and a grasp of their attitudes toward doing business in an area where businesses are predominantly dependent upon a highway for their livelihood. When completed, the inventory showed the trade and service industries in the Valley comprised 68[53] individual businesses. After classifying the businesses according to the Standard Industrial Classification Code,[54] the distribution of the establishments in the Valley was shown in Table 20.

As is the case in areas with limited population, many of the Swan-Clearwater Valley business enterprises find it necessary to deal in several general types of goods or services, or both, just to survive. In general, the establishments listed are classified by kind of business according to the principal lines of commodities sold. As might be expected, the profile of business establishments is recreationally oriented: 27.9 percent of all of the businesses are eating and drinking places; 27.9 percent are hotels, tourist courts and motels; and 10.3 percent trailer parks and recreational camps.

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[53] With the exception of four businesses which we were unable to contact, this was the number of trade and service businesses open and operating at the time of the survey in the summer of 1966.

[54] Standard Industrial Classification Manual, U. S. Government Printing Office Washington, D. C., 1957.

Table 20

Percentage Distribution of Swan-Clearwater Valley Business Establishments by Standard Industrial Classification Categories

SIC CODE	DESCRIPTION OF BUSINESS	NUMBER OF BUSINESSES	PERCENT OF BUSINESSES
539	General Merchandise Stores	5	7.4
541	Grocery Stores	2	2.9
554	Gasoline Service Stations	5	7.4
581	Eating & Drinking Places	19	27.9
591	Drug Stores	2	2.9
593	Antique and Secondhand Stores	1	1.5
595	Sporting Goods Stores	1	1.5
599	Miscellaneous Retail Stores	1	1.5
653	Real Estate Agents	1	1.5
701	Hotels, Tourist Courts, & Motels	19	27.9
703	Trailer Parks & Recreational Camps	7	10.3
721	Laundries, Laundry Services, and Cleaning & Dyeing Plants	2	2.9
723	Beauty Shops	2	2.9
724	Barber Shops	1	1.5
	TOTAL	68	100.0

These categories represent 66.1 percent of the trade and service businesses in the area.

In looking at the distribution of businesses by location, it is revealed that the largest percentage of these businesses is located in or around the two major communities of the study area, the Seeley Lake area and Big Fork, with the Seeley Lake area containing 38.2 percent of the business establishments and Big Fork 27.9 percent (see Table 21). The Swan Lake area follows in number of business establishments with 20.6 percent, and the Condon stretch of the highway contains the remaining 13.2 percent.

Table 21

Percentage Distribution of Swan-Clearwater Valley Businesses by Location Along Montana 209

BUSINESS LOCATION		PERCENT OF BUSINESSES
Big Fork		27.9
Seeley Lake Area		38.2
Swan Lake Area		20.6
Condon Area		13.2
	TOTAL	99.9*

*Totals 99.9 due to rounding.

This pattern of concentration of business by location along the highway corresponds quite closely with the traffic activity along the route; in other words, in the Seeley Lake area and Big Fork where the traffic flow is heaviest, there is the greatest concentration of businesses, whereas in the center section of the highway, the Condon area, both traffic flow and concentration of business establishments are less. As might be expected, the larger communities, Seeley Lake and Big Fork, have the more diverse retail trade and service facilities than the other areas. Big Fork is the most diverse and appears to have the best developed economic activity. This is understandable because, as was noted in the section on the historical development of the Valley, Big Fork was established as a trading center early, even before the turn of the century. As a result, it has had more time to mature and develop. Big Fork also has the advantage of an additional highway from which to draw trade. The Ferndale area, with its predominantly agriculture-oriented population and the recreational development of the northeast shore of Flathead Lake, has provided Big Fork with a broader economic and population base than the other communities in the study area. Consequently, Big Fork has developed a significant local market. The more diverse nature of Big Fork's tourist enterprises probably also results from a larger volume of absolute tourist business relative to the other communities. The Big Fork Playhouse, especially, has been successful in attracting people to the community. As the tourist business continues to grow along Montana 209, it can be expected that the development pattern of Seeley Lake and Swan Lake will follow along similar lines as that of Big Fork--a larger local market, less seasonality in business, more diverse retail trade and service sections, and more diverse tourist attractions.

Type of Business Clientele

An indication of just how important tourists were to the businessmen of the area came to light in response to the question, "upon what type of clientele is this business most dependent--tourists, summer homeowners or permanent residents?" The answer to this question provided the following results: 58.5 percent of the businesses are most dependent upon tourists, 35.4 percent are most dependent upon permanent residents, and 6.2 percent are most dependent on summer homeowners. The presentation of these data by location of the businesses (Table 22) shows that the communities of Seeley Lake and Big Fork are less dependent upon the tourists than are the businesses in the other two smaller communities. Note that the Big Fork businessmen report a 50 percent dependency on permanent residents. It is reasonable to expect that as the other communities expand, their dependency on permanent residents will increase accordingly; although at first glance it seems an anomoly, as the tourist activity of the area grows, so will the local permanent population as more people go into goods and service establishments to serve the tourists.

Table 22

Percentage Distribution of Swan-Clearwater Valley
Businesses According to Major Type of Clientele

(Type of Clientele Businesses are Most Dependent Upon:)

BUSINESS LOCATION	TOURISTS	SUMMER HOME OWNERS	PERMANENT RESIDENTS	TOTAL
Big Fork	50.0	0.0	50.0	100.0
Seeley Lake Area	50.0	8.3	41.7	100.0
Swan Lake Area	64.3	14.3	21.4	100.0
Condon Area	88.9	0.0	11.1	100.0

Average Length of Yearly Business Operation

Inasmuch as tourist trade is an important part of the area's business volume and the fact that this tourist business is largely seasonal, we felt it important to find out how many months a year the businesses in the Valley were open. The results of this investigation revealed that, on an average, the businesses were open 9.6 months per year with 60 percent of them staying open the year around. Here again the stability of Big Fork, in relation to the other communities, was pointed out. As shown in Table 23, the Big Fork businesses were open longest, an average of 10.4 months per year, with Swan Lake next in open time with 9.5 months. The difference in the average number of months that businesses are open also reflects the relatively fewer number of seasonal lodging businesses in Big Fork. Only 21.1 percent (the lowest proportion among the communities) of Big Fork business falls into the lodging category; the average for the entire study area is 38.2 percent. As one would expect, those businesses which are almost entirely tourist-oriented,

Table 23

Average Months Swan-Clearwater Valley Businesses are Open by Location of Businesses

LOCATION OF BUSINESS	AVERAGE MONTHS BUSINESSES ARE OPEN
Big Fork	10.4
Seeley Lake Area	9.3
Swan Lake Area	9.5
Condon Area	9.1
AVERAGE	9.6

such as the resort operations, are open just during the tourist season, approximately four months a year. Other firms which rely largely on permanent residents and commercial traffic for their business usually stay open the year around. However, a trend toward longer periods of business operation by the tourist-oriented businesses seems to be taking place. This trend undoubtedly will continue as the traffic on Montana 209 continues to grow.

Business Employment

One of the objectives of the employment part of the study was to determine to some degree the approximate size of the businesses in the study area and the employment base they provided. Each businessman was asked to state how many persons were employed in the firm, including himself. The time of part-time employees, whom many of the firms had on their payrolls, was calculated on a percentage basis of a full calendar year (for example, an employee of four months duration would be considered as a one third full-time employee). On this basis the total employment for the Valley in retail trade and services came to 163.7 full-time employees and an average of 2.4 employees per each Swan-Clearwater Valley firm. When it is considered that this average includes the proprietor, it is apparent that the retail trade and service firms in the study area are in general quite small. Many of them are "Mom and Pop" type of operations with all of the help coming from the immediate family. Out of the 68 businesses interviewed, there were only six which had a total of five or more employees, with the largest having 9.8 employees. As might be expected, the businesses with the highest employment average are in the larger communities of Big Fork and Seeley Lake (see Table 24). This is another indication that these two communities enjoy a better economic base than the smaller communities.

Table 24

Distribution of Average Employment Per Swan-Clearwater Valley Business by Business Location

BUSINESS LOCATION	NUMBER OF FIRMS	TOTAL EMPLOYMENT	AVERAGE EMPLOYMENT PER BUSINESS	ADJUSTED* PERCENTAGE DISTRIBUTION OF EMPLOYMENT
Big Fork	19	55.9	2.9	34.1
Seeley Lake Area	26	65.1	2.5	39.2
Swan Lake Area	14	27.0	1.9	16.5
Condon Area	9	15.7	1.7	9.6
TOTAL	68	163.7	Ave. 2.4	99.9**

*Non responses were assigned their group's average in order to represent all firms in the table (actually only one business in Seeley Lake area failed to respond).

**Totals 99.9 due to rounding.

Pattern of Business Development

The chronological establishment of businesses in the Valley reveals a rather interesting pattern. A few of the firms still in existence were established in 1900 or before. These are located in Big Fork, which had the earliest economic activity of any of the communities in the Valley. One general merchandise store and two lodging places date back to this 1900 period. As shown in Table 25, the general pattern of development of retail trade and services in the Valley began with an early establishment of general merchandise stores; one can also find quite an early development of lodging places.

Table 25

Distribution of Swan-Clearwater Valley Businesses by Classification of Business and by Year Established

SIC CODE	BUSINESS CLASSIFICATION	NUMBER OF BUSINESSES	YEAR ESTABLISHED
53	General Merchandise	1	1900
53		1	1939
53		1	1947
53		1	1949
53		1	1950
54	Grocery Stores	1	1926
54		1	1961
55	Gasoline Service Stations	3	1948
55		1	1956
55		1	1965
58	Eating & Drinking Places	1	1915
58		1	1932
58		1	1935
58		1	1940
58		1	1946
58		1	1947
58		1	1948
58		1	1951
58		1	1954
58		1	1960
58		1	1963
58		2	1964
58		2	1965
58		3	1966

Table 25 (cont'd.)

Distribution of Swan-Clearwater Valley Businesses by Classification of Business and by Year Established

SIC CODE	BUSINESS CLASSIFICATION	NUMBER OF BUSINESSES	YEAR ESTABLISHED
59	Miscellaneous Retail Stores	1	1949
59		1	1953
59		1	1960
59		1	1962
59		1	1965
65	Real Estate	1	1963
70	Hotels, Motels, Camps & Other Lodging Places	2	1900
70		1	1925
70		1	1932
70		3	1936
70		1	1941
70		3	1946
70		1	1947
70		2	1948
70		1	1950
70		1	1952
70		1	1953
70		1	1954
70		1	1957
70		1	1958
70		4	1966
72	Personal Services	1	1951
72		2	1959
72		1	1960
72		1	1961

The establishment of eating and drinking places was rather consistent over the years, although a number of new firms began operating since 1960--three of them starting in business in 1966, the year of the interviews. Lodging places had a relatively consistent growth, with an upsurge in 1966 when four new lodging places were established. The "miscellaneous retail stores" category, including drug stores, gift shops and the one sporting goods store, were found to be established relatively late. This is understandable since these stores need a broader market base than less specialized stores. Personal service establishments had a late development too, because they also require a relatively broad population base to exist successfully. It is interesting to note that the majority of the miscellaneous and personal service establishments is located in Big Fork, and that all of the establishments in these two classifications are located either in Big Fork or Seeley Lake, the two largest communities. This indicates that these two communities have developed to the point where miscellaneous retail stores and personal service firms are feasible. As the other two communities develop, they, too, should experience a growth pattern much the same as the communities of Big Fork and Seeley Lake.

Table 26 provides a comparison of business establishments prior to 1950; those established during the last 16 years are shown by location along the highway. Here again the data indicate that Big Fork had the earliest growth, although the Seeley Lake and Condon areas had the greatest growth in new business in recent years. It can be inferred from this that the highway lent support to the increase in business establishments along the route; however, it is difficult to ascertain what effect the completion of the various sections of the highway had upon this increase in business establishment. The data indicate that since 1960 there has been an above average increase in number of new businesses along the highway, except for the Swan Lake area where the growth has remained constant.

Table 26

Distribution of Swan-Clearwater Valley Businesses by Time Period of Establishment and by Location of Business

LOCATION	TIME PERIOD OF ESTABLISHMENT	NUMBER OF BUSINESSES	PERCENTAGE OF BUSINESSES
Big Fork	1900-1950	10	52.6
	1950-1966	9	47.4
Seeley Lake Area	1920*-1950	10	40.0
	1950-1966	15	60.0
Swan Lake Area	1925*-1950	6	50.0
	1950-1966	6	50.0
Condon Area	1939*-1950	4	44.4
	1950-1966	5	55.6
	TOTAL	65**	

* Earliest reported date for area.

** Only 65 responses out of the 68 firms contacted.

Business Expansion and Improvement

It was felt that data on expansion and improvement of business facilities would provide some indication of the trend of business growth. As a consequence, each businessman was asked if and when he had made any expansion or improvement in physical facilities or addition of services. The type of expansion, improvement, or addition of services was recorded, as well as the approximate date on which it took place. One problem resulted here,in that dates of older changes in the physical facilities were difficult to remember and minor changes were less well-remembered than major ones. Also, for the older businesses and those that had changed hands, old changes in the facilities were either unknown or couldn't be recalled. These conditions made it difficult to establish a trend of business expansion over time, and also difficult to relate the changes in any direct way to the construction completion of the highway. Nevertheless some interesting information was revealed when the type of improvements that had been made were examined. The type of improvement,by percentages,for retail trade and for service firms is shown in Table 27. As Table 27 shows, the largest percentage of improvements for both retail trade and services proved to be physical enlargement of facilities: 62.5 percent of retail trade improvements fell into this category, as did 75.1 percent of the services improvements. If "relocations of the business activity" represented a movement to larger physical facilities and thus may be considered as enlargement,then 76.8 percent of all improvements involved enlargement. These data seem to indicate that the amount of business activity in the area is growing rapidly.

The Trend of Business

To get an indication of the general trend of business volume in the Valley, each businessman was asked how much he felt his business volume had

Table 27

Percentage Distribution of Improvements by Type of Improvement for Retail Trade and Services in the Swan-Clearwater Valley*

RETAIL TRADE

TYPE OF IMPROVEMENT	PERCENTAGE OF ALL IMPROVEMENTS
Enlargement of Physical Facilities	62.5
Remodel Physical Facilities	12.5
Relocation of Business	16.7
Replace Capital Equipment	4.2
Addition to Capital Equipment	4.2
Total	100.1**

SERVICES

TYPE OF IMPROVEMENT	PERCENTAGE OF ALL IMPROVEMENTS
Enlargement of Physical Facilities	75.1
Remodel Physical Facilities	9.4
Replace Capital Equipment	3.1
Addition to Capital Equipment	9.4
New Items Added w/o Enlargement of Physical Facilities	3.1
Total	100.1**

*35 of the 68 businesses reported improvements.
**Totals 100.1 due to rounding.

increased or decreased over the five-year period from 1960 to 1965 and what he estimated his 1966 business would be in relation to the previous year, 1965. The average change for all businesses for the five-year period was a reported 62.4 percent increase in total volume; however, the number of businessmen responding to this question (17 of 68) was too small to provide a valid indicator. The data regarding the estimated percentage change of business in 1966 over 1965 appeared more reliable, although it must be remembered that these were estimates and perhaps reflected more the attitude of the businessman than actual facts. Table 28 presents the average reported estimated change in business for the year 1966 over 1965 by location along the highway.

Table 28

Reported Average Increase in Business Volume in 1966 over 1965 in the Swan-Clearwater Valley by Location of Businesses

LOCATION OF BUSINESS	AVERAGE PERCENT OF CHANGE IN BUSINESS BETWEEN 1965 AND 1966
Big Fork	+ 28.3
Seeley Lake Area	+ 4.8
Swan Lake Area	+ 39.1
Condon Area	+ 10.0
AVERAGE	+ 23.4

The general outlook for business in Big Fork was bright. The responses revealed a fairly confident business community. In examining the data, it was found that this optimism was widespread and not isolated by any particular group or type of businesses. This was not true for the other business areas. As a whole, they were less optimistic. The Swan Lake area response shows the highest average reported increase, but this was caused by a few optimistic responses--one in particular by a business which had undergone a recent change in ownership, where the new owner within the past year had made a large expansion in the physical facilities and the services offered. As the data show, the businessmen in the Seeley Lake area were the least optimistic. This was due, in part, to the fact that at the time the interviews were conducted a sawmill near Seeley Lake was on the verge of closing down (and did so right after the interviewing took place). The threat of unemployment had affected consumer purchases by those families who relied on the sawmill for their livelihood. This slowdown in business from a portion of the permanent residents of the community, along with the uncertainty of what the future might bring, caused considerable pessimism to be voiced in the Seeley Lake area, particularly by those businessmen who were not tourist-oriented or only partly so. One proprietor went so far as to say that he would have to close his doors if the mill shut down. This gives an indication of the narrow economic base in Seeley Lake and the marginal nature of some of the businesses located here. It may be, too, that the Seeley Lake area has grown too fast for the present amount of business volume. This could certainly be true for the aforementioned miscellaneous type of firms which require a larger economic base to survive than do the basic retail outlets. It can be speculated that the highway temporarily made the Seeley Lake area over-optimistic about its economic potential, and, as a result, an over-built condition developed. This is not uncommon for fast growing communities, and after the transitional period they generally come out of it stronger than ever.

Businessmen's Comments on Highway

A question asked of the businessmen interviewed was: "What effect do you feel the completion of the Swan-Clearwater Highway has had upon your business?" They were also asked for their general comments about the Montana 209, whether the comments related to business or not. The general attitude toward the completion of the highway was very similar, regardless of the businessman's location along the route. Naturally, because of the greater total number of businesses in the two larger communities, the comments came in large part from businessmen in Big Fork and Seeley Lake, with quite a few from the Swan Lake area. Selected comments which seemed to best illustrate the general attitude of the businessmen along the route are listed below by the type of business and according to the location of the businessmen interviewed.

Comments of Big Fork Businessmen[55]

Real Estate Office - "Highway 209 has opened up a lot of valuable property. Property along the highway since the pavement has doubled in value."

Drug Store - "I think we are getting more Swan Valley business - also more of the Ferndale - also tourist business which is taking this route to Glacier."

Cafe - "Believe opening of 209 is reason for 25 percent increase in business."

Sport Shop - "We get more people from Great Falls as a result of Highway 209. This has helped business."

Tavern - "It is easier for the Ferndale people to enter town this way than go around. In taking old route we stand to lose some to Kalispell."

Resort - "I am sure Highway 209 had a great impact on our business.... I think all of Big Fork was helped by the highway."

Hotel - "It has had a big impact upon us. Big Fork has done a lot for the highway too. Big Fork is where people want to come."

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[55] These comments or statements are given verbatim from the questionnaire forms.

Note: This businessman also pointed out that, if the communities were to gain the greatest benefit from the highway, the businessmen were going to have to provide more and better facilities. On one day in July in 1966, all of the lodging facilities in Big Fork kept a record of the number of people they had to turn away because of lack of space. The number of people they turned away in this one day totaled 1,500. Undoubtedly a party may have been counted several times in this total, but this figure is indicative of the shortage of facilities in peak periods of tourist traffic.

Comments of Swan Lake Area Businessmen

Bar - "Highway brings more tourists every year. This is getting to be the main run between Glacier and Great Falls."

Service Station - "Highway has certainly improved business....Sure has brought many more people into the area and in that way has loused the community up."

Cabins - "Quite a change as a result of highway. We get many more overnight guests. We lost many of our regular customers because it has become so commercialized. Only thing we don't like is all the logging trucks."

General Store - "Highway is what has made this country what it is now."

Cafe - "There are more people traveling than ever before but I believe they stopped better before. They had to stop to get up courage to go further."

Garage - "If it wasn't for the tourists and the highway, there would be no business."

Resort - "The only reason I came to this area was because of the highway. I had looked at this area for a couple of years and got real [sic] interested when the highway was completed."

Comment of Condon Businessman

Store and Post Office - "If more people knew how good this highway is they would use it. Once you get the tourists to try the highway they will come back. We get a lot of tourists going from park to park."

Comments of Seeley Lake Businessmen

Motel - "It really has helped business since the highway has gone completely through to Kalispell. There are now a lot of truckers going through here whereas they used to go through the Flathead Valley. It is surprising how many people come through here and say they never knew the highway was here. We would do better if we did more advertising."

Cabins - "We are real [sic] lucky we are situated on the highway. We are quite happy with the highway....They seem to take better care of it here than they do in most places. The closer you get to Missoula the worse is the highway."

Motel - "This is the best highway in the state and it is in the best condition."

Drive-in Eating Place - "The highway through here to Kalispell brings in a lot of tourists. People think this is a lovely drive."

Cafe - "We have had tremendous increases in our business. If they would improve the damn [sic] thing it would be better. Believe we have the worst section of paved highway in the state from Clearwater Junction to Bonner."

Drug Store - "Couldn't be without the highway. It has been a tremendous help."

Trailer Court - "Oh boy! It would be back to about a 1950 status without the highway. Many more tourists--many more intrastate tourists in the area. Many from Great Falls--Helena and the like."

In reviewing the comments of the businessmen in the study area, there are several salient points. Without exception they feel there has been a considerable increase in traffic as a result of the completion of Montana 209. In large measure, they seem to agree that the composition of traffic coming into the area has changed. More intrastate motorists are utilizing the highway and more truckers, salesmen, and other commercially-oriented traffic are taking this route. It was voiced frequently that Montana 209 is now the route to take in traveling between the two major parks, Yellowstone and Glacier, and that tourists are gradually realizing this.

The fact was also mentioned that not only has summertime traffic increased, but the winter traffic volume has also grown markedly. For a number of highway-oriented businesses, this has helped offset the winter slump in business activity. The businesses thus affected had high praise for the highway as an all weather route and for the maintenance crews that kept it free of snow during the winter months. In fact, the maintenance crews received high accolades from a number of people interviewed.

Some of the criticism regarding Highway 209 presented by the businessmen seems to merit mention. Perhaps the criticism voiced most often concerned the fact that the highway is so little known outside the immediate area. Quite a number emphasized that the highway should be better publicized; yet there was some controversy here. Some of the businessmen, especially the old timers owning resorts, felt that the present heavy traffic had caused them to lose customers--those who were interested in getting away from the hustle and bustle the increased traffic caused. It seemed that their business had maintained a constant level, but now it was made up more of new short-stay trade where previously repeat customers came year after year to stay the summer.

Another negative reaction to publicity on the highway involved the article that appeared in the magazine Field and Stream, entitled "Montana's Drive-in Wilderness."[56] Apparently, this article was responsible for attracting people from at least as far away as Texas. (Texans were mentioned several times as responding to the article.) The criticism was that the article overemphasized the wilderness aspect of the immediate area. The tourists did not find themselves isolated but packed in with other tourists, and what disappointed them most was the fact that they were not able to make the large catches of fish which the article had led them to believe was possible.

Almost without exception the businessmen had praise for the Swan-Clearwater Highway, but particularly in the Seeley Lake Area they were quite bitter about the condition of Montana 20 from Clearwater Junction to Bonner.

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[56] Byron W. Dalrymple, op. cit., p. 122.

The thought that they left with the interviewer was that when this road was put in shape the Swan-Clearwater Valley would have an even greater increase in traffic.

One point that was brought up a number of times concerned the short tourist season. The common assumption was that the tourist season only lasts about two months and that an effort to lengthen the season would certainly help the Valley economically. One suggestion that was made quite consistently had to do with the school year. School, in most areas now, begins the week before the Labor Day Weekend. This, it was reported, cuts the Valley out of a good week of tourist trade and is especially detrimental to the Labor Day Weekend business.

In summary, it can be said that the business community of the Valley is most pleased with the impact of Highway 209; however, as one Seeley Lake man aptly stated, it has been a two-edged sword. The highway has brought additional trade to the Valley but also, by permitting easier access to the outside marketing centers, has taken business away. This man was thinking primarily of the permanent residents who now do more of their shopping in Missoula. Also, the impact of the highway has brought new business enterprises into the communities and thereby has increased local competition. Some of the old timers, as they usually do, longed for the "olden days" before the hustle and bustle of the traffic had upset their peaceful existence.

Chapter VIII

Social Aspects of the Highway

Population Mobility

A good transportation system provides many social benefits,most of which cannot be quantified. The mere fact that the mobility of the population is facilitated opens up a wide range of social betterment; market centers are more accessible providing those served by the transportation system with a wider assortment of goods, cultural centers can better be taken advantage of, professional services are more accessible, emergencies are less threatening and social intercourse in general is facilitated. The Swan-Clearwater Highway has certainly provided greater mobility to the residents of the Valley. Not only has it facilitated movement with the Valley,but has made the population centers outside of the Valley more accessible. Where formerly, before the construction of the highway, it was a major journey to either Missoula or Kalispell, now the residents consider it an easy trip. It was reported several times in interviews that housewives thought nothing of driving from Seeley Lake to Missoula to do their week's shopping. Not only did they regard the trip as a marketing venture but a social function as well; making the trip to the city was an excursion and marketing merely the rationale for going.

All-Weather Route

Employment mobility is another social advantage which the highway has provided. Workers residing in the Valley have a wider range of employment opportunities because of the easier access to them. For example, Seeley Lake residents commute to jobs in Bonner and other points of equal distance.

During the summer months, workers who occupy summer homes travel daily back and forth between the Swan-Clearwater Valley and Missoula. The easy access the highway has provided makes it possible for those workers and their families to enjoy summer home living without interrupting their employment.

The construction of Montana 209 perhaps made its greatest contribution to mobility by providing easy access in the winter time. From the reports of those who lived in the Valley prior to the construction of the highway, winter time travel of any extent in the "before highway" days was resorted to only in situations of fairly high necessity and social travel as such was discouraged. One of the features the permanent residents seem to brag about most is the fact that Montana 209 is one of the best all-weather routes in the state.

It may be that the winter time mobility the highway provided the residents of the Valley is more important to them personally than the summer time mobility. During the winter months many of them may have the leisure time to travel and socialize, whereas the summer is their busy work season.

In general it can be said that the isolation which was characteristic of much of the Swan-Clearwater Valley has been in great part eliminated through the improved mobility Montana 209 has provided. Opportunities for urban shopping, recreation, church, lodge, and other associations have been broadened with the improved highway transportation.

Education

Improvements in educational opportunities are another social benefit gained through a better transportation system. Improved highways are associated with such gains as larger and better equipped schools, lower transportation costs, and a higher percentage of enrolled pupils actually attending. These improvements in public education are, of course, also due to changes other than improvements in highway transportation. The increased school enrollment depends on increasing population and the improvement in attendance records may reflect improvements in public health.[57] It is quite discernible that Montana 209 has had an impact upon education in the Swan-Clearwater Valley. Through the easier access, which probably has contributed to the increase in population, three new public schools have been constructed in the Valley proper during, and since the construction of the highway, two elementary schools and one high school have been added. The highway helped make it possible to combine four elementary schools into two. In the Condon area two one-teacher schools (Smith Flat and Wine Glass) with an enrollment of about 15 pupils each were closed in 1957 and a new (Swan Valley) elementary school opened. The new school had an enrollment of 63 pupils in the spring of 1967.

In the Seeley Lake area two small elementary schools, which were heated with wood stoves and had outdoor toilets, also existed until 1957 when the present Seeley Lake elementary school was opened; however, it was not until 1961 that Placid Lake closed and incorporated with the new Seeley Lake School. In 1960 the combined enrollment of the two schools was 125 pupils; in 1967 the enrollment had increased to 201 and the number of teachers had increased from six to nine.

Perhaps the greatest educational advancement has taken place in the secondary level.

Prior to 1958, the graduates of the elementary schools in the lower Swan-Clearwater Valley were given per diem allowances for the purpose of continuing their education in the county high school in Missoula. Many of the prospective students, however, used this money to go to the school of their choice in other counties. Therefore, in 1956 the Missoula County High School System decided to contract for a bus to transport the students from the Seeley Lake area to Missoula. This bus service was inaugurated in 1958 and transported about six students to Missoula. The round trip comprised about 142 miles and was considered to be the longest daily school bus route in the nation. The students boarded the bus around 6:00 a.m. and arrived at home around six or seven o'clock in the evening. This was quite an unsatisfactory arrangement. The students were always tired from the long ride and had little time for their homework. During the school year, the student traveled approximately 26,000 miles, enough distance to circle the world. This unsatisfactory arrangement and the fact that the population in the area had increased, made it possible for the Seeley-Swan High School to be constructed in 1964 at Seeley Lake. The initial enrollment in 1964 was 92 students which increased to 145 in the 1966-67 year. The new high school served more than just the Seeley Lake area. Ovando high school students,who formerly had to board out or furnish their own transportation to the Powell County High School in Deer Lodge,are bussed to Seeley-Swan;and to the north, students are bussed from as far away as the Missoula County line which cuts through the Swan Valley above Condon. The bus route serving this area is approximately 82 miles in length. It is estimated the bus travels over 15,000 miles per year on the Swan Valley route; but this is far less than the 26,000 miles traveled on the Missoula run, and far more students are served.

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[57] Highways and Economies and Social Changes, U. S. Department of Commerce, Bureau of Public Roads, United States Government Printing Office, Washington, D. C.: November, 1964, p. 173.

In Swan Lake there was a one-room elementary school until 1957 when it was enlarged to a two-room school. In 1965, after Montana 209 was completed, the 6th, 7th, and 8th grades were bussed into Big Fork. The high school students had all along been transported to Big Fork by bus. Except for improving the bussing situation for the Swan Lake and Ferndale area students, Montana 209 apparently had little impact upon education in Big Fork.

In summary, it seems apparent that Montana 209 has made a contribution to education in the study area, particularly from the Missoula County line south. New school buildings have been constructed, school consolidation has taken place, more efficient bus service has been provided,and in general, the educational opportunities for the young people are more favorable. Not only has this benefitted the local communities, but the nearby Ovando area too. This improved school system has provided the study area with more than just education opportunities; it is responsible for social opportunities as well. The larger and improved schools have tended to become the social centers of the communities. In particular,the Seeley-Swan High School with its athletic program and other extra curricular activities,has provided the lower Swan-Clearwater Valley with a common community interest. The community allegiance to the "Blue Hawk" athletic teams has drawn the community members into a tighter knit group. As a result, residents report that all community ties and community support have been strengthened.

Public Services

As with education, the relationship between improved highway transportation and the provision of public services is complex. Public services require residential and business activity and can only survive if they are present. The most noticeable change in public services in recent years has occurred in the community of Seeley Lake. In 1958 the first deputy sheriff was appointed for formal police protection. In 1966 fire trucks and other fire fighting equipment were purchased and a fire protection program was initiated. At the time of the study,a fire hall was under construction and was scheduled to be completed in the summer of 1967. Seeley Lake is also served by an ambulance service which began service in 1965. The community has plans for the addition of other public service facilities, one of which is a new community hall.

The other communities in the study area cannot point to such recent dramatic increases in public service. Long established, Big Fork had its public service growth early. Swan Lake and Condon still do not have the population necessary to support public services to any great extent, although, the Swan Lake residents report that their community hall which was constructed in 1957 is now used a great deal more. The highway has made the Swan Lake volunteer fire department more efficient, and it has helped provide better medical care in the area. The ambulance service from Kalispell to the Swan Lake area now can make the trip quickly and safely the year around with the new all-weather highway. In regard to police protection, the Swan Lake and Condon areas now have the security of more efficient patrols by the State Highway Patrol, and Big Fork has recently acquired a deputy sheriff, whereas previously the community relied on the State Highway Patrol. Especially for the public services which require the use of a good transportation system such as fire and police protection and ambulance service, Montana 209 has made a considerable direct contribution.

Public Utilities

Utility companies often benefit from the construction of a highway by being permitted use of the highway right-of-way. However, in discussing this with the officials of the public utility companies which serve the Swan-Clearwater Valley,there did not seem to be any defined plan of highway right-of-way utilization in the study area. Probably the highway's greatest contribution in bringing public utilities to the Swan-Clearwater Valley was in opening it up for settlement and thereby providing an adequate population base to support public utilities and provide for their future growth. Electric utility lines did not come into the Seeley Lake area until 1955 when approximately 200 customers signed up for the service. The number of power customers served by the Missoula Electric Cooperative in the area now numbers nearly 900[58] with the power line extending to just north of the Missoula County line in the Swan Valley. Telephone service (except for a toll line with nine toll phones) came into the Clearwater Valley in 1961 when the Blackfoot Telephone Cooperative formed an exchange. At the time of the study, a modern water distribution program was in the making for the Seeley Lake area. The contract for a water tower and a distribution system was to be let during the summer of 1967 and was intended to be in operation by the fall of 1967.

Public utility lines entered the Swan Lake area prior to the completion of the last two sections of the highway. In 1961, a telephone exchange was formed with 22 initial subscribers; and by July of 1966 the number of hookups had increased to 49. The number of electric hookups in the area increased from 200 in 1960 to nearly 300 in 1967.

There has been a considerable gain in the use of public utilities in the study area since the highway has been constructed; however, as stated earlier, increase in telephone and electric hookups is largely a function of population and it would be most difficult to state what direct benefit the highway had upon the development of public utilities within the Swan-Clearwater Valley.

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[58] These include total hookups which means a number of part time residents and businesses are included.

Summary

There are many other social aspects of the effects of a modern highway upon an area that can be considered such as the impact upon residential areas: community blight, relocation of residents and businesses, employment conditions, and the like; but to take up each possible area of social impact did not seem to be pertinent to the study. Rather,the authors decided to deal only with the more apparent social changes. It seems quite safe to say that Montana 209 has definitely made the population of the area more mobile, has contributed to education, has facilitated public services,and in general,has made the Swan-Clearwater Valley a more convenient and comfortable place to live.

Chapter IX

Summary and Conclusions

As the title of this report suggests, the primary objective of the research study was to determine the economic impact of State Highway Montana 209 on the Swan-Clearwater Valley. It has been mentioned that it is difficult to determine the direct contribution any highway makes upon an area because so many factors other than just transportation facilities must be considered. In the case of Montana 209, the problem is accentuated because of the fact that it was constructed in sections with the initial completion taking place in 1952 and the last completion in 1964. Also, the fact that the research was not initiated until 1966 made it difficult to get definitive information. In spite of these difficulties,the research revealed a respectable amount of evidence to support the contention that Montana 209 has made a substantial contribution to the economic and social welfare of the communities in the Swan-Clearwater Valley. As one resident of Seeley Lake stated, "The community virtually entered the 20th century when Route 209 was constructed."

As noted in Chapter II, in the historical development of the Swan-Clearwater Valley, the roads into the Valley, before the construction of Montana 209,were so bad they discouraged travel. In contrast,the new paved route encouraged travel, and as a result,motorists in increasing number were attracted to the Swan-Clearwater Valley. This is illustrated by the increased rate of traffic flow on Montana 209. In the past 16 years,the traffic on the highway has increased fourfold. This rate of increase (illustrated in Figure 8) is far greater than the increase of traffic flow on comparable highways in the state. Another important aspect of Montana 209 is that it provided an all-weather route through the Swan-Clearwater Valley, thus opening the Valley up for traffic the year around.

The research on logging revealed that there has been a dramatic change in the annual sales of stumpage in the Swan-Clearwater Valley since the initial phase of the highway's construction. The annual sales volume of the stumpage in the area has more than doubled since 1950. This increase in stumpage sales was particularily marked where privately owned land was concerned. This would indicate that the easier access provided by Montana 209 has made timber production on private land more feasible,and as a result, more profitable. However, as far as logging and timber management practices are concerned, the Swan-Clearwater Valley seems still in a transition period; and it may be that the full effect of Montana 209 upon this economic activity has yet to be realized.

Recreation, another major economic activity of the Valley, (encompassing many sorts of goods and service businesses) has experienced a substantial growth in the number and size of physical facilities since the start of construction on Montana 209. The research revealed that there has been a considerable increase in recreational demand in the area and that this increased demand has resulted in many profitable opportunities for private investment in recreational facilities as well as providing justification for the expansion of public recreational facilities. As was illustrated in the section on recreation, 23 out of 28 large private or miscellaneous facilities and 20 of 40 federal or state facilities were constructed or modified during the period between 1950 and 1966. As with logging, here again it was felt that the full impact of Montana 209 upon the recreational development has yet to be realized. For example, in the Big Fork area alone there are now recommendations and tentative plans for the development of three major recreational facilities: a new summer playhouse, a new boat harbor and a group of campsite facilities.[59] In Swan Lake, business people are discussing the possibility of a winter sports complex in the area. This has progressed to the point where a snow survey is now being taken. At the other end of the Swan-Clearwater Valley, a $250,000 commercial complex is presently under construction at the junction of Montana 209 with Montana 20. The initial phase of construction will consist of a bar-lounge and restaurant facilities. A second unit will follow with a store and service station. Present plans call for a motel, a trailer court and a campground to be added in 1968. Montana 209 plays an important role in the planning and development of these facilities, especially the latter two. Without the traffic the highway provides, it is doubtful that these complexes would be considered feasible.

The study's residential research revealed that over half (56.2 percent) of the homes in the Swan-Clearwater Valley have been constructed since 1950, and that 66.3 percent of these residences are utilized as summer homes by their owners. There is ample reason to believe that the land ownership pattern has been a determent to residential growth, and that if more land suitable for home location had been available, the residential growth of the area would have been even greater. However, the recentness of the residential growth in the Valley suggests that Montana 209 had considerable influence in the growth. Interestingly, the residential development of the

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[59] Economic Evaluation of Tourism and Recreational Potential of Portions of Flathead and Lake Counties, Montana. Volume II, Economic Development Administration, Washington, D. C., February 1966, p. 5. A report prepared by Corplan Associates of IIT Research Institute, 10 West 35th Street, Chicago, Illinois.

Valley in the past decade and a half follows a pattern which generally coincided with the construction sequence of Montana 209.

If one can rely on the comments and attitudes of the business people in the area,the impact of Montana 209 on the trade and service industries of the Swan-Clearwater Valley must be considered very favorable. Naturally, businesses rely on people for their success,and the highway has drawn greater numbers of people into the Valley. With so much of the business volume in the Valley dependent upon tourists, it is quite understandable why comments such as "couldn't be without the highway" were voiced. In all areas of the Valley except Big Fork, half or more of the business firms now in existence have been established since 1950. This pattern of development coincides with the residential growth in the Valley; however, most of the businesses are highway oriented and the traffic flow on Montana 209, whether it is of residents or tourists, is vital to the success of these businesses. The feeling of the businessmen in regard to the highway is one of optimism. They feel that the full economic impact of Montana 209 has yet to be realized--that as soon as the highway is better known and the connecting routes leading to it are improved, the traffic flow will be even greater,and as a result,business in general will increase.

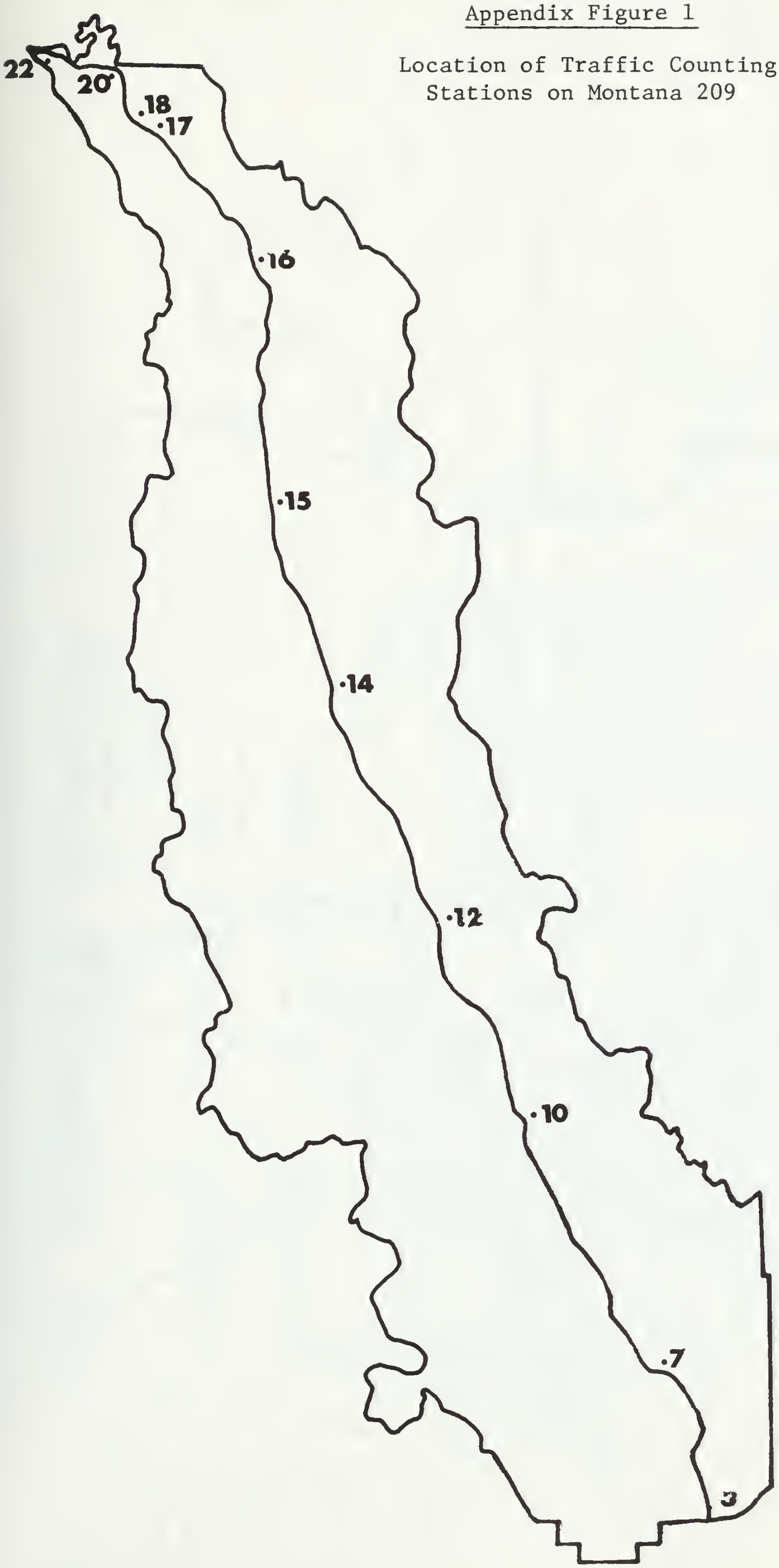
Socially, Montana 209 has brought quite a marked improvement in the mobility of the residents of the Valley which has opened up a wider range of social opportunities. A prime example of social change in the Valley which has taken place is in education. Since the construction of the highway new schools have opened, old one-and two-room schools have been closed, school consolidation has taken place,and bus transportation has been improved. As a result of the better educational system,community interest has grown, creating stronger community identification. Another area of social improvement has been the increase in public services within the communities of the Valley and a greater efficiency in those that were present at the time of the construction of Montana 209. More public utilities have entered the Valley in the last decade and have increased their service at a marked rate in the 1960's. All in all, the social benefits received by the residents in recent years have made the Swan-Clearwater Valley a most pleasant place to live and obviously Montana 209, by providing year around easy access, has played an important role in this change.

In conclusion it seems safe to say that this research has revealed that considerable economic and social gains have been made in the Swan-Clearwater Valley during and since the construction of Montana 209. As was frequently mentioned in the report,it is difficult to determine accurately or quantitatively the contribution Montana 209 has made to this social and economic betterment of the Valley. However, it is evident that completion of Montana 209 is at least partly responsible for the area's recreational development, its increased tourist business, its growth in population, its increased logging activities, and for the greater social benefits available to the area's residents.

- APPENDIX -

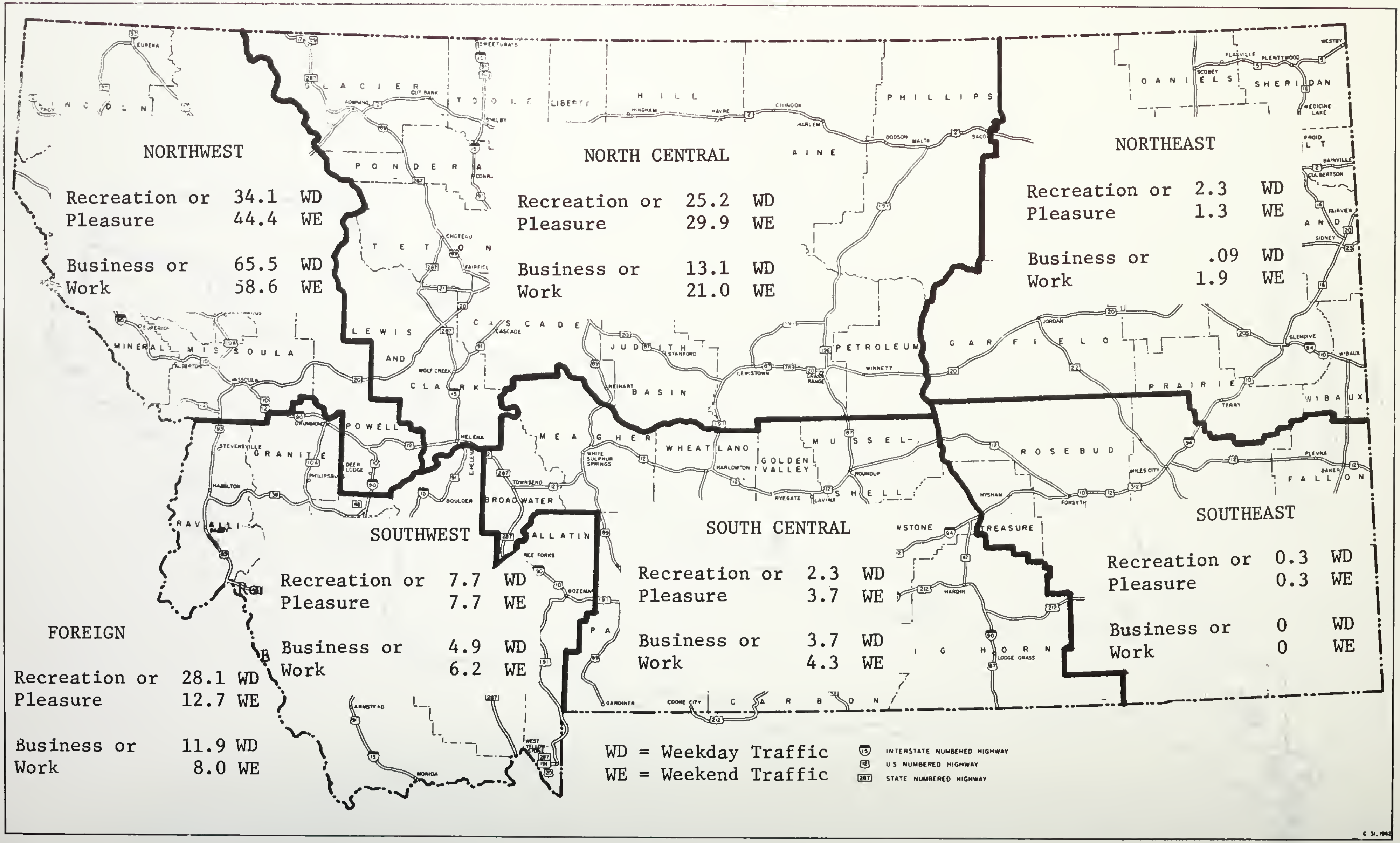
Appendix Figure 1

Location of Traffic Counting Stations on Montana 209



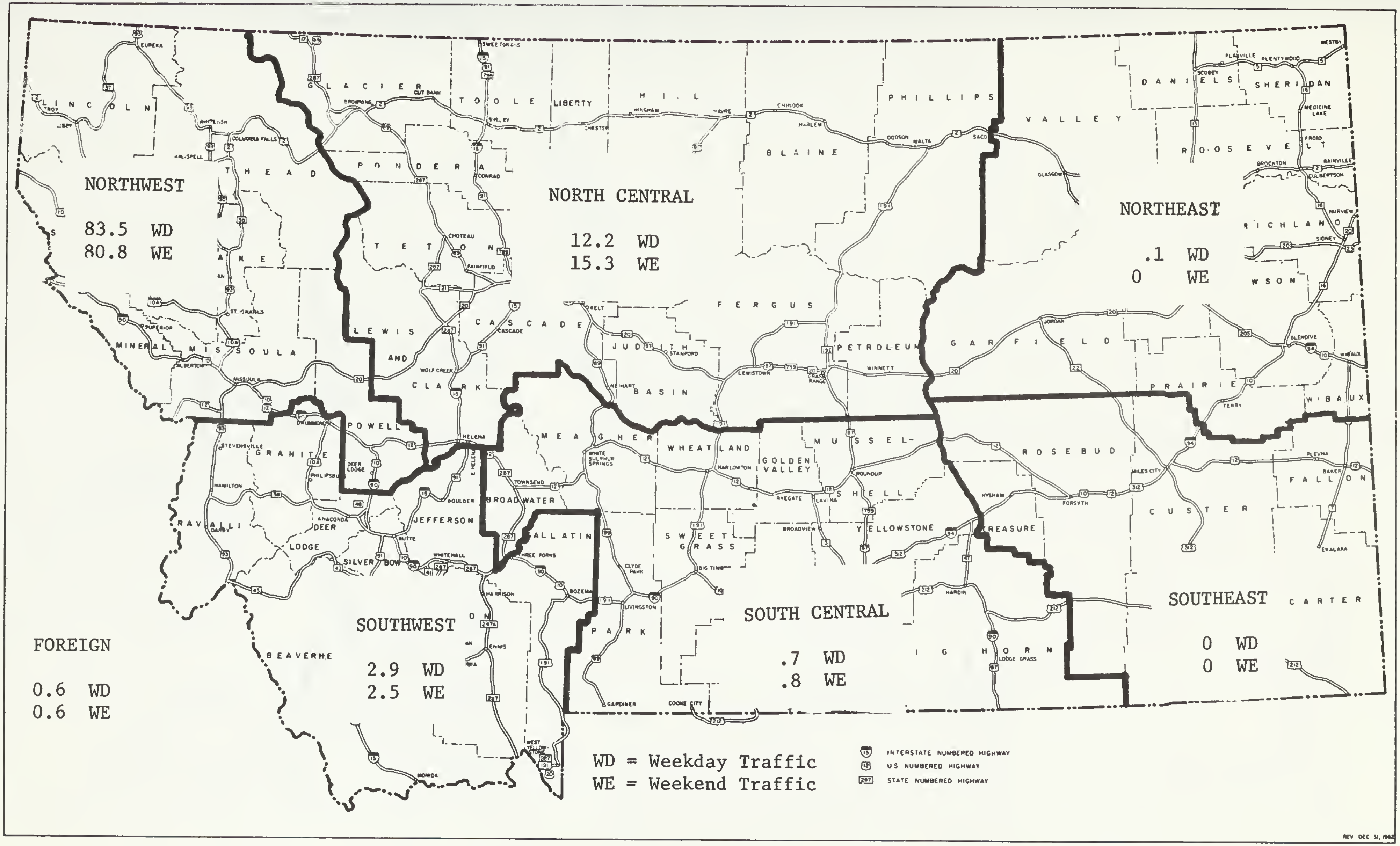
Appendix Figure 2

Percentage Distribution of Montana 209 Traffic by Region, by Vehicle Registration and by Trip Purpose for Weekdays and Weekends, Summer 1966


NORTHWEST
Recreation or Pleasure 34.1 WD 44.4 WE
Business or Work 65.5 WD 58.6 WE
NORTH CENTRAL
Recreation or Pleasure 25.2 WD 29.9 WE
Business or Work 13.1 WD 21.0 WE
NORTHEAST
Recreation or Pleasure 2.3 WD 1.3 WE
Business or Work .09 WD 1.9 WE
SOUTHWEST
Recreation or Pleasure 7.7 WD 7.7 WE
Business or Work 4.9 WD 6.2 WE
SOUTH CENTRAL
Recreation or Pleasure 2.3 WD 3.7 WE
Business or Work 3.7 WD 4.3 WE
SOUTHEAST
Recreation or Pleasure 0.3 WD 0.3 WE
Business or Work 0 WD 0 WE
FOREIGN
Recreation or Pleasure 28.1 WD 12.7 WE
Business or Work 11.9 WD 8.0 WE
WD = Weekday Traffic
WE = Weekend Traffic
INTERSTATE NUMBERED HIGHWAY
US NUMBERED HIGHWAY
STATE NUMBERED HIGHWAY

Appendix Figure 3

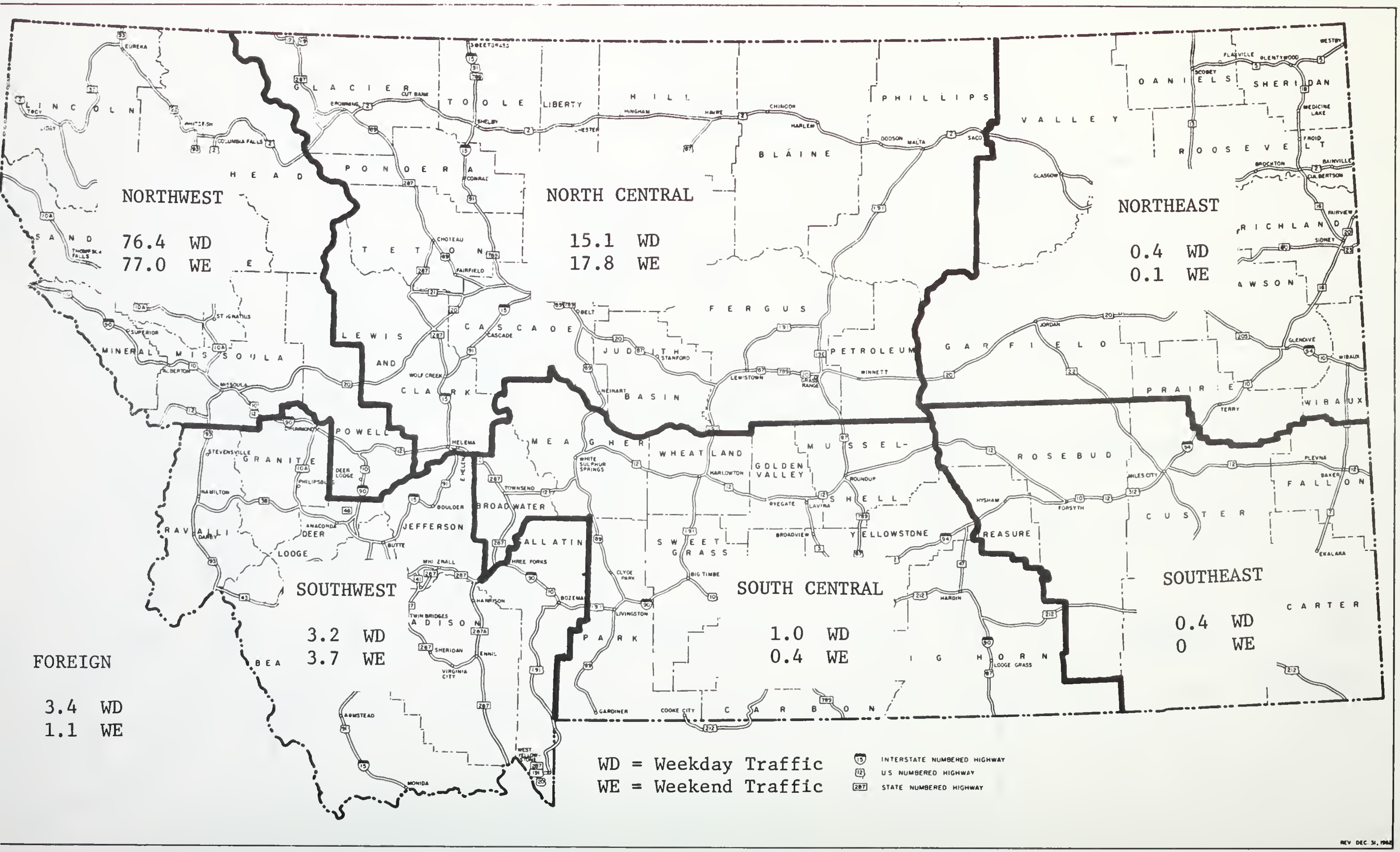
Percentage Distribution of Montana 209 Traffic by Region and Origin*
for Weekdays and Weekends, Summer, 1966



*The figures within each region indicate the percentage of motorists (weekday-weekend) who began their day's trip within the region designated.

Appendix Figure 4

Percentage Distribution of Montana 209 Traffic by Region and by Destination*
for Weekdays and Weekend, Summer, 1966



*The figures within each region indicate the percentage of motorists (weekday-weekend) who planned to make their day's destination within the region designated.

Appendix Exhibit 1

1966 Traffic Counts and the Expansion Factor Application

The 1966 Origin and Destination Surveys were taken on a 16-hour-per-day basis, and as a result, had to be expanded to arrive at an estimated total count for the week and for the weekend. The weekend was defined as starting at 5 p.m. Friday and ending Sunday at 10 p.m. The remaining time was assigned to weekdays. On the basis of 16-hour days, this made the weekend 37 hours long and the week 75 hours long. The expansion factor which was then applied to arrive at the total traffic was the number of hours in each period (week-weekend) divided by the number of hours represented in the manual counts. The expansion factors then were:

Weekday period expansion factor: $\frac{75}{27} = 2.778$

Weekend period expansion factor: $\frac{37}{37} = 1.0$

The application of these expansion factors to the manual counts then yielded:

Weekday period traffic:	4172
Weekend period traffic:	3546

It was then necessary to expand these traffic volumes to a 24 hour day basis. The average 16 hour day traffic was calculated and the night travel (10 p.m. to 6 a.m.) percentages were applied. These are standard percentages which have been developed to take into account nighttime travel. These night travel percentages are 9.2 percent for weekdays and 8.1 percent for weekends. The results of the application of these percentages were:

Traffic period	16 hour average		Night travel percentage		Number of nights		Period night traffic
Weekday	890	X	9.2	X	5	=	410
Weekend	1533	X	8.1	X	2	=	248

To arrive at the total traffic figures for each travel period, the night traffic figures were added to the 16 hour day based traffic volume.

Appendix Table 1

Weekday and Weekend actual
traffic counts by time of count
and hours counted

WEEKDAY TRAFFIC

TIME OF COUNT	VEHICLES COUNTED	HOURS OF COUNT
Monday 6 a.m. - 2 p.m.	436	8
Wednesday 2 p.m. - Dark	385	8
Thursday 6 a.m. - 2 p.m.	420	8
Friday 2 p.m. - 5 p.m.	261	3
TOTAL	1,502	27

WEEKEND TRAFFIC

TIME OF COUNT	VEHICLES COUNTED	HOURS OF COUNT
Sunday 2 p.m. - Dark	702	8
Saturday 6 a.m. - 2 p.m.	467	8
Saturday 6 a.m. - 2 p.m.	807	8
Sunday 2 p.m. - Dark	1,349	8
Friday 5 p.m. - Dark	221	5
TOTAL	3,546	37

Total weekday period traffic: 4172+410=4582

Total weekend period traffic: 3546+248=3794

8376

Thus the total weekly flow of traffic amounts to 8376 vehicles (4582+3794=8376). When these figures are used to determine the percentages of weekday and weekend traffic to total traffic we found that 54.7 percent of the traffic occurs on weekdays and 45.3 percent occurs on weekends.

☐ ☐☐ ☐☐ ☐☐ ☐☐ ☐☐☐ 12

Appendix Exhibit 2

SWAN-CLEARWATER STUDY
QUESTIONNAIRE

A. PERMANENT RESIDENCE

1. Where is your permanent residence?
Swan or Clearwater Valley ____________________.

Other (please specify) ____________________. ☐☐☐☐ 16
town state

If your Swan-Clearwater home is not your permanent residence...

2. How many months in 1965 did you use your Swan-Clearwater home? __________. ☐☐ 18
(no. of months)

How many months during 1966 do you plan to use your Swan-Clearwater home? __________. ☐☐ 20
(no. of months)

B. CONSTRUCTION & IMPROVEMENTS

3. In what year was your Swan-Clearwater home built? (If you are not sure, give your best guess.) ________. ☐☐ 22
(year)

4. Since the construction of your home have there been any improvements on the home or other buildings on your property?
Yes ☐ No ☐ ☐ 23

Please describe any improvements on your property and when you made them.

1. ______________________________. ________. ☐☐☐ 26
(year)

2. ______________________________. ________. ☐☐☐ 29
(year)

3. ______________________________. ________. ☐☐☐ 32
(year)

Please describe any improvements in other buildings (including new buildings or other new facilities such as boat docks, etc.)

1. ______________________. ________ (year). ☐☐☐ 35

2. ______________________. ________ (year). ☐☐☐ 38

3. ______________________. ________ (year). ☐☐☐ 41

5. If you were to improve your property, what is the first thing you would do? (What, that is, do you feel it needs most now?)

____

______________________________. ☐ 42

Do you have definite plans of doing this in the near future?

Yes ☐ No ☐ ☐ 43

6. When did you acquire your Swan-Clearwater property?

________. (year) ☐☐ 45

C. PUBLIC UTILITIES SERVICE

7. Does your Swan-Clearwater home have:

Telephone Service Yes ☐ No ☐ ☐ 46

Electrical Service Yes ☐ No ☐ ☐ 47

8. When were these services initially installed?

Telephone Service

________________ (specify year) Don't Know ☐ ☐☐ 49

Electrical Service

________________ (specify year) Don't Know ☐ ☐☐ 51

D. PERSONAL DATA

9. What is your job title? ________________.

Would you describe what you do? ________________

______________________________. ☐☐☐ 54

10. How many in your immediate family occupy your Swan-Clearwater home? ________(Please indicate no.) ☐☐ 56

11. What is the approximate age of the head of the family? ________. ☐☐ 58

12. We know that people do not normally like to report their income, but it would be most helpful to us in our study if we knew approximately your family income. This information will be held in strict confidence. However, if you do not wish to reply to this question, do not do so; but please mail in the answer to the rest of the questions.

(Please check appropriate answer.)

a. Under $2,500 ☐

b. $2,500 - $5,000 ☐

c. $5,000 - $7,500 ☐

d. $7,500 - $10,000 ☐

e. $10,000 - $15,000 ☐

f. $15,000 - $25,000 ☐

g. Over $25,000 ☐ ☐ 59

Appendix Exhibit 3

INVENTORY OF BUSINESS ESTABLISHMENTS
QUESTIONNAIRE

☐ ☐☐ ☐☐ ☐☐ ☐☐
1 2 3 4 5 6 7 8 9

*Serial Number ________________ ☐☐☐
10 11 12

1. Name and location of business

____
name location

*twnshp ☐ *range ☐ *section ☐

____
legal owner mailing address

2. Description of services, retail facilities, etc. (e.g. drug, grocery, service station; rank facilities in descending order).

1. ____________________________ ☐☐ 13 14

2. ____________________________ ☐☐ 15 16

3. ____________________________ ☐☐ 17 18

4. ____________________________ ☐☐ 19 20

5. ____________________________ ☐☐ 21 22

* SIC code ☐ ☐☐☐ 23 24 25

* FOR OFFICE USE ONLY

3. How many months per year is this business in operation? (use a 1965-66 average).

____
(no. of months)

26 27

Specify any closure of only part of the facilities ________

____.

4. How many employees (including the proprietor and immediate family) did this business have in the calendar year 1965? Use fractions of full-time year employment for part-time or seasonal full-time employees.

____
number of employees

28 29 30

5. What year was this business established? ________________
(year)

31 32

6. Specify year(s) of expansion of physical facilities and/or addition(s) of services or major retail items (e.g. establishment of drug sales, installation of gasoline pumps, etc.). Specify type of expansion and additions.

Expansion or Addition	Year	
________________	________	33 34 35
________________	________	36 37 38
________________	________	39 40 41

7. Public utilities service: does the business have

telephone service Yes ☐ No ☐ ☐ 42

electrical service Yes ☐ No ☐ ☐ 43

When were these services initially installed?

telephone service __________ (year) ☐☐ 44 45

electrical service __________ (year) ☐☐ 46 47

8. How much does the proprietor think business has increased or decreased?

1960 to 1965 ______% ☐☐☐ 48 49 50

1965 to 1966 ______% ☐☐☐ 51 50 53

9. Upon what type of clientele is this business most dependent?

☐ tourists

☐ summer homeowners

☐ permanent residents ☐ 54

10. Note physical size of business for hotels, motels, guest ranches and service stations.

____

____.

☐☐☐☐☐☐☐☐☐☐ 55 56 57 58 59 60 61 62 63 64

Comments:

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